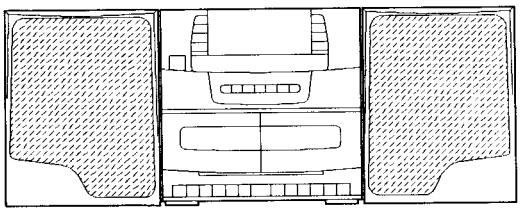
aiwa

aiwa SERVICE

CA-DW700M
CA-DW710M
NSX-E7M

SERVICE MANUAL



CD CARRY COMPONENT SYSTEM

- BASIC TAPE MECHANISM: TN-21ZSW-1622
- BASIC CD MECHANISM: 4ZG-2BC70
- TYPE: HE, HR, EE, K, EZ (E7M)
  U (700M, 710M), LH (710M)

S/M Code No. 09-95A-116-7FE

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SPECIFICATIONS

Tuner section

FM: 87.5 - 108 MHz
Antenna: FM antenna

MW (AM): EXCEPT LH, U :
531 - 1,602 kHz
LH, U :
530 - 1,710 kHz
Antenna: Ferrite bar antenna

LW (EE, K, EZ only): 153 - 288 kHz
Antenna: Ferrite bar antenna

SW (HE, HR only): 3.8 - 12.5 MHz
Antenna: Ferrite bar antenna

Amplifier section :

Power output
HE, HR :
5 W + 5 W (EIAJ/4 ohms AC)
U :
FTC rule
4 watts per channel min.
RMS at 4 ohms, Irom 65 Hz to 15 kHz, with no more than 1 % total harmonic distortion
5 W + 5 W (EIAJ/4 ohms)
LH :
5 W + 5 W (EIAJ/4 ohms)
EE, K, EZ :
6.5 W + 6.5 W (DIN MUSIC POWER)
5 W + 5 W (10 % THD/4 ohms AC)
4 W + 4 W (DIN 1% RATED power)

Power requirements
HE, HR :
DC 12 V using eight R20 (Size D) batteries
AC 110-120/220-240 V switchable
LH :
DC 12 V using eight Size D (R20) batteries
AC 110-120/220-240 V switchable
U :
DC 12 V using eight Size D (R20) batteries
AC 120 V
EE, K, EZ :
DC 12 V using eight R20 (Size D) batteries
AC 230 V

Power consumption
EXCEPT U : 30 W
U : 40 W

CD Player section

Disc Compact disc
Scanning method Non-contact optical scanner (semiconductor laser application)
Semiconductor laser λ =780 nm
Rotation speed Approx. 500 - 200 rpm/CLV
Error correction Cross interleave, Reed Solomon code
Number of channels 2 channels
D/A converter 1 bit dual

Cassette deck section

Track format 4 tracks, 2 channels
Frequency response Normal tape: 50 Hz –12,000 Hz (EIAJ)
Recording system AC bias
Erasure system Magnet erase
Motor DC motor 1
Heads Deck 1
Recording/playback head (1)
Erasure head (1)
Deck 2
Playback head (1)

Common section

Dimensions (W x H x D)
NSX-E7M :
676 x 268 x 326 mm
(26⅝ x 10⅝ x 12⅞ in.)
CA-DW700M :
676 x 268 x 326 mm
(26⅝ x 10⅝ x 12⅞ in.)
CA-DW710M :
665 x 268 x 299 mm
(26¼ x 10⅝ x 11⅞ in.)

Weight
NSX-E7M :
8.3 kg (18 lbs. 5 oz.)
(without batteries)
CA-DW700M :
8.3 kg (18 lbs. 5 oz.)
(without batteries)
CA-DW710M :
8.0 kg (17 lbs. 10 oz.)
(without batteries)

Speaker :

Cabinet type 2-way bass reflex type
Speaker 120 mm cone type woofer
27 mm ceramic type tweeter
Impedance 4 ohms
Allowable max. input 10 W
Dimensions (W x H x D)
NSX-E7M :
210 x 258 x 276 mm
(8⅜ x 10¼ x 10⅞ in.)
CA-DW700M :
210 x 258 x 276 mm
(8⅜ x 10¼ x 10⅞ in.)
CA-DW710M :
204.5 x 258 x 246 mm
(8⅛ x 10¼ x 9¾ in.)

Weight
NSX-E7M :
1.6 kg (3 lbs. 8 oz.)
CA-DW700M :
1.6 kg (3 lbs. 8 oz.)
CA-DW710M :
1.45 kg (3 lbs. 3 oz.)

• Design and specifications are subject to change without notice.

DISASSEMBLY INSTRUCTIONS

Gear timing

1. Make sure that slits of the GEAR CAM BOX 1 and GEAR CAM BOX 2 are set as figure-1 shown.

2. Make sure that round holes of the GEAR, UP/DOWN (B) and (C) are aligned. (Figure-1)

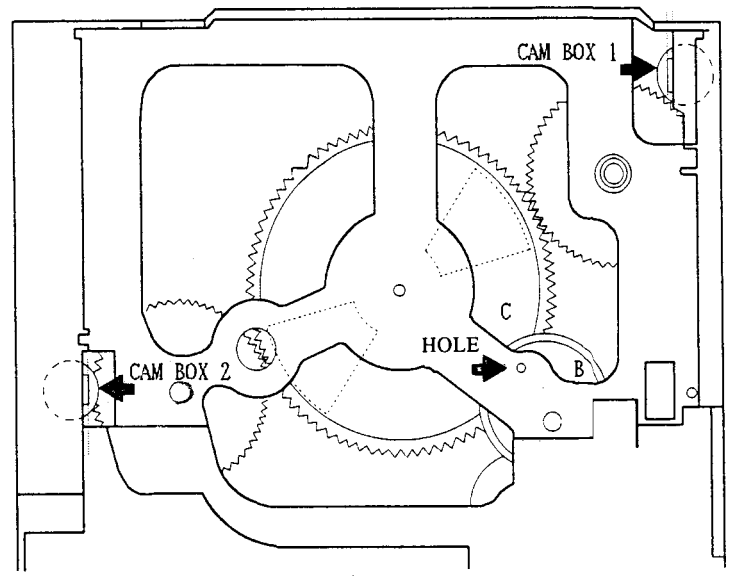


Figure-1

GEAR CAM BOX and SPR-C, G-BOX assemble

1. GEAR CAM BOX 1 and SPR-C, G-BOX 1 are different with GEAR CAM BOX 2 and SPR-C, G-BOX 2.

2. Make sure that tab quantity of each GEAR CAM BOX and length of each SPR-C, G-BOX as figure-2 shown when assembling.

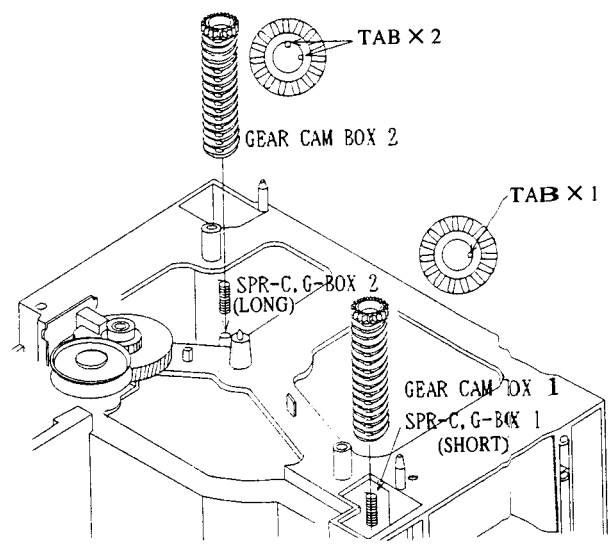


Figure-2

When assembling the tray

1. Align marks of the GEAR CAM LOCK and GEAR TRAY LOAD Ⓐ. (Figure-3)

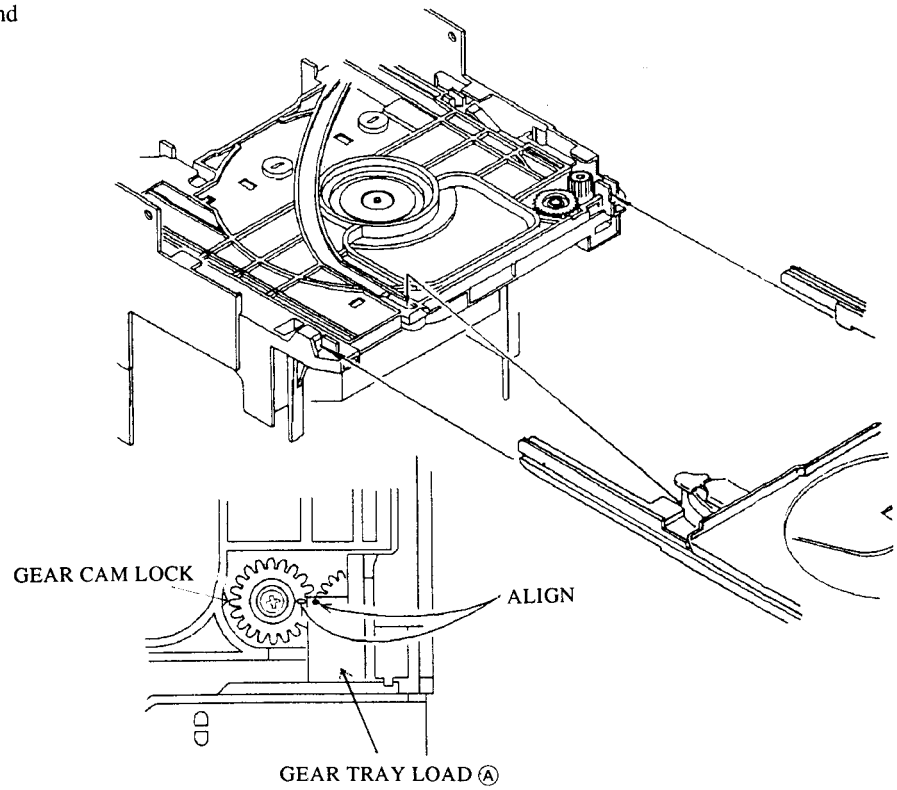


Figure-3

Gear positions

1. Make sure that ㉓, ㉔, ㉕, ㉖ gears are positioned as figure-4 shown when turning the GEAR CAM ㉚ counterclockwise fully.

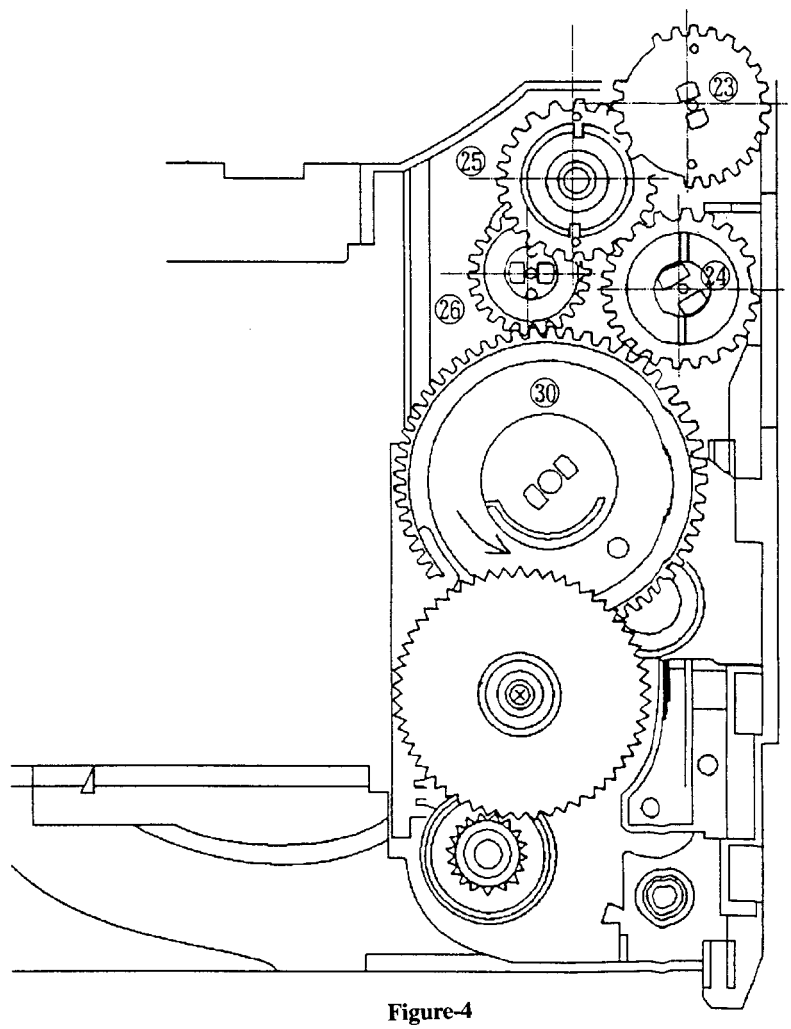
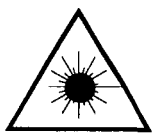


Figure-4

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!
WHEN SERVICING, DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION. BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICK-UP BLOCK.



- Caution: Invisible laser radiation when open and interlocks defeated avoid exposure to beam.
- Advarsel:· Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling.

VAROITUS!
Laiteen Käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyt-täjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.

VARNING!
Om apparaten används på annat sätt än vad som specificeras i denna bruksanvising, kan användaren utsättas för osynling laserstrålning, som överskrider gränsen för laserklass 1.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

ATTENTION
L'utilisation de commandes, réglages ou procédures autres que ceux spécifiés peut entraîner une dangereuse exposition aux radiations.

ADVARSEL!
Usynlig laserstråling ved åbning, når sikkerhedsafbrydereer ude af funktion. Undgå udsættelse for stråling.

This Compact Disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the rear exterior.

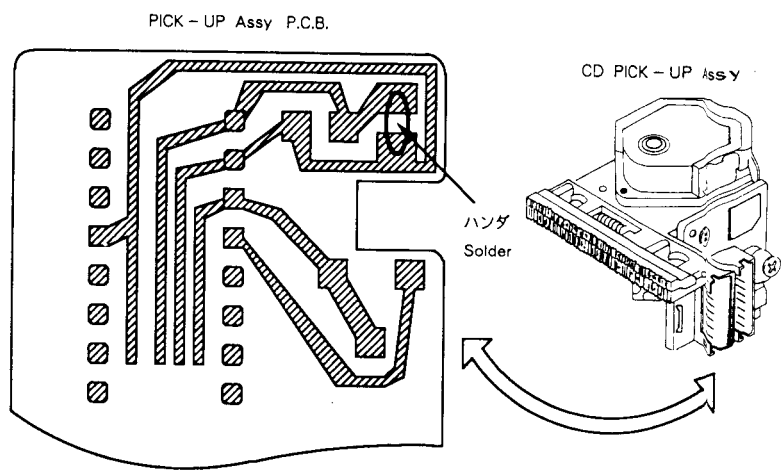
CLASS 1	LASER PRODUCT
KLASSE 1	LASER PRODUKT
LUOKAN 1	LASER LAITE
KLASS 1	LASER APPARAT

Precaution to replace Optical block

(HPC-1C)

Body or clothes electrostatic potential could ruin laser diode in the optical block. Be sure ground body and workbench, and use care the clothes do not touch the diode.

1) After the connection, remove solder shown in figure below.



ELECTRICAL MAIN PARTS LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
IC			
	85-CJ3-601-010		IC,LC867124V-5811
	87-070-134-010		IC,TA2065F
	87-017-680-010		IC,TA8176SN
	S1-025-210-000		IC,BU2029
	87-070-101-010		IC,TC9284F
	87-017-801-010		IC,TA2058F
	87-070-083-010		IC,GP1U281X
	87-001-536-010		IC,NJM78M05FA
	87-070-231-040		IC,TA2063F
⚠	S1-011-910-000		IC,ICP-N10,IC PROTECTOR<HE>
	87-017-915-010		IC,BU4094BCF
	87-001-982-010		IC,TA7291S
	87-002-268-010		IC,LA1851N
	87-001-376-010		IC,LC7218
	87-017-681-010		IC,TA8126S
	87-020-828-010		IC,BA3416BL
	87-001-440-010		IC,BA15218N
	87-017-889-010		IC,NJM4558LD
	87-017-914-010		IC,BU4094BC
	87-027-666-080		IC,BU4052BC
	87-017-787-010		IC,M62412P 2CH
	87-017-564-010		IC,LC7533
	87-002-848-010		IC,TA8229K
	87-001-132-010		IC,ICP-N38
	87-001-206-010		IC,S-81250HG
TRANSISTOR			
	S2-2SC-192-306		TR,2SC19230
	87-026-291-080		TR,DTC124XS
	S2-901-5C5-000		TR,9015C
	89-112-965-010		TR,2SA1296GR
	87-026-269-080		TR,DTA114ES
	87-026-203-080		TR,DTC114YS
	89-110-153-410		TR,2SA1015GR
	S2-901-4C5-000		TR,9014C
	87-026-464-080		TR,DTC114TS
	87-026-219-080		TR,DTA144TS
	87-026-288-010		TR,DTA143XS<EXCEPT U,LH>
	89-501-615-010		TR,2SK161Y
	87-026-287-080		TR,DTC143ES
	87-026-288-080		TR,DTA143ES
	89-502-466-010		TR,2SK246Y
	89-318-154-010		TR,2SC1815GR
	87-026-572-080		TR,DTA114YS
	89-320-011-010		TR,2SC2001L
	89-322-406-510		TR,2SC2240GR
	89-414-680-010		TR,2SD1468
	89-210-154-010		TR,2SB1015Y
	89-109-522-080		TR,2SA952K
DIODE			
	87-020-465-010		DIODE,1SS133
	S3-1SS-135-100		DIODE,1SS135<EXCEPT U,LH>
	S3-FR2-021-000		DIODE,FR202
	S3-Z82-V80-000		ZENER,MTZJ8.2C
	S9-7U0-5R6-1B0		ZENER,MTZJ5.6B
	S3-MTZ-J13-C80		ZENER,MTZJ13C<K>
	S3-MTZ-J15-A10		ZENER,MTZJ15A<EXCEPT K,HR>
	S3-UTZ-J15-A10		ZENER,UTZJ15A<HR>
MAIN C.B			
C64	87-010-490-010		CAP,E 0.1-50V
C103	87-010-908-010		CAP,E 220-10V
C104	87-010-035-010		CAP,E 2.2-50V
C108	87-016-073-080		CAP,E 1-50V
C109	87-016-073-080		CAP,E 1-50V
C110	87-016-073-080		CAP,E 1-50V
C111	87-010-492-040		CAP,E 0.33-50V
C113	87-015-995-010		CAP,E 4.7-50V
C116	87-010-412-080		CAP,E 10-25V
C131	87-015-692-080		CAP,E 0.22UF-50V
C132	87-015-692-080		CAP,E 0.22UF-50V
C142	87-016-459-080		CAP,E 470-10V
C160	87-010-264-080		CAP,E 100UF-10V
C167	87-015-697-010		CAP,E 3.3-50V
C194	87-010-264-080		CAP,E 100UF-10V
C195	87-010-891-010		CAP,E 47-10V
C305	87-015-718-010		CAP,E 47-16V
C306	87-015-718-010		CAP,E 47-16V
C307	87-010-038-010		CAP,E 22-25V
C308	87-015-699-080		CAP,E 10UF-50V
C309	87-015-692-080		CAP,E 0.22UF-50V
C310	87-015-692-080		CAP,E 0.22UF-50V
C311	87-010-908-010		CAP,E 220-10V
C312	87-010-653-010		CAP,E 47-25V
C315	87-016-073-080		CAP,E 1-50V
C316	87-016-073-080		CAP,E 1-50V
C317	87-010-038-010		CAP,E 22-25V
C318	87-010-038-010		CAP,E 22-25V
C319	87-015-699-080		CAP,E 10UF-50V
C320	87-015-699-080		CAP,E 10UF-50V
C327	87-015-995-010		CAP,E 4.7-50V
C331	87-010-891-010		CAP,E 47-10V
C351	87-016-073-080		CAP,E 1-50V
C501	87-016-073-080		CAP,E 1-50V
C502	87-016-073-080		CAP,E 1-50V
C503	87-016-073-080		CAP,E 1-50V
C504	87-016-073-080		CAP,E 1-50V
C505	87-016-459-080		CAP,E 470-10V
C531	87-016-073-080		CAP,E 1-50V
C532	87-016-073-080		CAP,E 1-50V
C539	87-015-692-080		CAP,E 0.22UF-50V
C540	87-015-692-080		CAP,E 0.22UF-50V
C541	87-010-653-010		CAP,E 47-25V
C571	87-016-073-080		CAP,E 1-50V
C572	87-016-073-080		CAP,E 1-50V
C573	87-016-073-080		CAP,E 1-50V
C574	87-016-073-080		CAP,E 1-50V
C579	87-010-891-010		CAP,E 47-10V
C580	87-016-073-080		CAP,E 1-50V
C581	87-010-490-010		CAP,E 0.1-50V
C582	87-016-459-080		CAP,E 470-10V
C583	87-016-459-080		CAP,E 470-10V
C591	87-016-073-080		CAP,E 1-50V
C592	87-016-073-080		CAP,E 1-50V
C607	87-010-038-010		CAP,E 22-25V
C608	87-010-038-010		CAP,E 22-25V
C609	87-010-653-010		CAP,E 47-25V
C613	87-010-264-080		CAP,E 100UF-10V
C614	87-010-264-080		CAP,E 100UF-10V
C615	S0-ELT-122-2M0		CAP,E 2200UF-10V
C616	S0-ELT-122-2M0		CAP,E 2200UF-10V
C621	87-010-653-010		CAP,E 47-25V
C622	87-010-387-080		CAP,E 470UF-25V
C623	87-010-492-040		CAP,E 0.33-50V
C624	87-010-492-040		CAP,E 0.33-50V
C625	87-015-699-080		CAP,E 10UF-50V
C641	87-010-908-010		CAP,E 220-10V
C721	87-010-582-080		CAP,E 4700UF-35V
C722	87-010-110-080		CAP,E 220UF-25V
C723	87-010-908-010		CAP,E 220-10V
C726	87-015-995-010		CAP,E 4.7-50V
C727	87-010-264-080		CAP,E 100UF-10V
C728	87-016-459-080		CAP,E 470-10V
C729	87-010-264-080		CAP,E 100UF-10V
C730	87-010-908-010		CAP,E 220-10V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C741	87-016-131-080		CAP,E 100-25V
C742	87-010-684-010		CAP,E 330UF-16V<EXCEPT HE>
C831	87-010-412-080		CAP,E 10-25V
C832	87-010-264-080		CAP,E 100UF-10V
C833	87-010-908-010		CAP,E 220-10V
C834	87-010-908-010		CAP,E 220-10V
CF1	S2-900-081-000		CER,FIL FM 10.7MHZ
CF101	S2-900-081-000		CER,FIL FM 10.7MHZ
CT51	SC-N10-050-MS0		CAP,TRIMMER 10PF-50V<EXCEPT U,LH>
CT51	SC-N20-050-MS0		CAP,TRIMMER 20PF-50V<U,LH>
CT52	SC-N10-050-MS0		CAP,TRIMMER 10PF-50V<HE,HR>
CT52	SC-N30-050-MS0		CAP,TRIMMER 30PF-50V<K,EE,EZ,EEZ>
IFT101	S6-016-510-000		COIL,QUAD FM
J601	S2-3B0-111-000		JACK,HP ST
J801	S2-3A0-132-000		JACK,PIN RCA
L1	S7-A00-490-000		COIL,FM 2-15T-0.5C
L2	S7-A00-550-000		COIL,AMT FM
L3	S7-A00-480-000		COIL,FM 5.5-4 1/2
L4	87-005-676-080		INDUCTOR,2.2UH
L5	S7-A00-480-000		COIL,FM 5.5-4 1/2
L51	S6-017-510-000		COIL,OSC LW PS<K,EE,EZ,EEZ>
L51	S6-017-810-000		COIL,OSC PS<HE,HR>
L52	S6-017-810-000		COIL,OSC PS<EXCEPT HE,HR>
L52	S6-018-410-000		COIL,OSC SW3<HE,HR>
L61	S7-B00-741-000		COIL,ANT AM<K,EE,EZ,EEZ>
L61	S7-B00-751-000		COIL,ANT AM 110MM<U,LH>
L61	S1-800-061-000		FERRITE BAR,SW<HE,HR>
L62	S7-B00-641-000		COIL,ANT AM<HE,HR>
L62	S7-C00-221-000		COIL,ANT LW<K,EE,EZ,EEZ>
L151	87-005-643-080		INDUCTOR,4.7UH
L152	87-003-149-080		INDUCTOR,47UH
L191	S6-016-310-000		COIL,OSC 7K
L192	87-005-659-080		INDUCTOR,100UH
L301	S6-019-310-000		COIL,OSC BIAS AC 7MM
L601	S7-A00-590-000		COIL,TOROIDAL(5UH)<K,EE,EZ,EEZ>
L602	S7-A00-590-000		COIL,TOROIDAL(5UH)<K,EE,EZ,EEZ>
MFT101	S6-016-610-000		FILTER CFMT-037
SFR101	SR-V22-310-000		SFR,22K(B)
SFR102	SR-V10-360-000		SFR,10K
SFR751	SR-V22-260-000		SFR,2.2K
SW301	S8-024-710-000		SW,6P2T(PS62D01)
VC1	S3-SVC-203-300		DIODE,SVC203SPA/SVC203SPA-AA3
VC2	S3-SVC-203-300		DIODE,SVC203SPA/SVC203SPA-AA3
VC3	S3-SVC-203-300		DIODE,SVC203SPA/SVC203SPA-AA3
VC51	S3-KV1-260-344		DIODE,KV1260TS2-34<EXCEPT U,LH>
VC52	S3-KV1-260-344		DIODE,KV1260TS2-34
X101	S2-900-581-000		CERA,RESO KBR457HS15
X151	S2-101-004-000		X'TAL 7.2MHZ

FRONT C.B

C1	87-010-264-080		CAP,E 100UF-10V
C7	87-016-073-080		CAP,E 1-50V
C8	87-016-073-080		CAP,E 1-50V
C9	87-010-264-080		CAP,E 100UF-10V
C10	87-010-412-080		CAP,E 10-25V
C12	87-010-264-080		CAP,E 100UF-10V
C404	87-016-073-080		CAP,E 1-50V
C405	87-015-692-010		CAP,E 0.22-50V
C407	87-016-073-080		CAP,E 1-50V
C409	87-010-264-080		CAP,E 100UF-10V
C410	87-015-699-080		CAP,E 10UF-50V
C413	87-010-412-080		CAP,E 10-25V
D6	S2-800-011-000		LED,3MM(RED)
D18	S2-800-501-000		LED,3MM(ORN)
D19	S2-800-501-000		LED,3MM(ORN)
D20	S2-800-501-000		LED,3MM(ORN)
D21	S2-800-501-000		LED,3MM(ORN)
D22	S2-800-501-000		LED,3MM(ORN)
D23	S2-800-491-000		LED,3MM
D24	S2-800-491-000		LED,3MM
D25	S2-800-491-000		LED,3MM
D26	S2-800-491-000		LED,3MM
D27	S2-800-491-000		LED,3MM
D28	S2-800-491-000		LED,3MM
D29	S2-800-491-000		LED,3MM
D30	S2-800-491-000		LED,3MM
D31	S2-800-491-000		LED,3MM
D32	S2-800-491-000		LED,3MM
D33	S2-800-491-000		LED,3MM
D34	S2-800-491-000		LED,3MM
D35	S2-800-491-000		LED,3MM
D36	S2-800-491-000		LED,3MM
D41	S2-800-491-000		LED,3MM
D42	S2-800-491-000		LED,3MM
D43	S2-800-491-000		LED,3MM
D44	S2-800-491-000		LED,3MM
D45	S2-800-491-000		LED,3MM
D46	S2-800-491-000		LED,3MM
D47	S2-800-491-000		LED,3MM
D48	S2-800-491-000		LED,3MM
D49	S2-800-491-000		LED,3MM
D50	S2-800-491-000		LED,3MM
D51	S2-800-491-000		LED,3MM
D52	S2-800-491-000		LED,3MM
D53	S2-800-491-000		LED,3MM
D54	S2-800-491-000		LED,3MM
J401	S2-300-371-000		JACK,MIC MONO 3.5MM
L1	87-003-102-080		INDUCTOR,10UH
L2	S7-A00-570-000		COIL,TOROIDAL RI-818462
L3	S7-A00-570-000		COIL,TOROIDAL RI-818462
L4	87-005-672-080		INDUCTOR,1UH<EXCEPT LH,HE,HR>
LCD1	S2-700-831-000		LCD,AIW4029T-30P(CADW100)
SW1	S8-024-610-000		SW,TACT 1P1T
SW2	S8-024-610-000		SW,TACT 1P1T
SW3	S8-024-610-000		SW,TACT 1P1T
SW4	S8-024-610-000		SW,TACT 1P1T
SW8	S8-024-610-000		SW,TACT 1P1T
SW9	S8-024-610-000		SW,TACT 1P1T
SW10	S8-024-610-000		SW,TACT 1P1T
SW11	S8-024-610-000		SW,TACT 1P1T
SW12	S8-024-610-000		SW,TACT 1P1T
SW13	S8-024-610-000		SW,TACT 1P1T
SW14	S8-024-610-000		SW,TACT 1P1T
SW15	S8-024-610-000		SW,TACT 1P1T
SW16	S8-024-610-000		SW,TACT 1P1T
SW18	S8-024-610-000		SW,TACT 1P1T
SW19	S8-024-610-000		SW,TACT 1P1T
SW20	S8-024-610-000		SW,TACT 1P1T
SW21	S8-024-610-000		SW,TACT 1P1T
SW22	S8-024-610-000		SW,TACT 1P1T
SW23	S8-024-610-000		SW,TACT 1P1T
SW24	S8-024-610-000		SW,TACT 1P1T
SW25	S8-024-610-000		SW,TACT 1P1T
SW26	S8-024-610-000		SW,TACT 1P1T
SW27	S8-024-610-000		SW,TACT 1P1T
SW28	S8-024-610-000		SW,TACT 1P1T
SW29	S8-024-610-000		SW,TACT 1P1T
SW30	S8-024-610-000		SW,TACT 1P1T
VR401	S1-501-281-000		VOLUME,MIC 10KA
X1	S2-101-014-000		X'ATL 32.768KHZ
X2	S2-900-731-000		CERA,RESO KBR6.0MKS

CD C.B

C4	87-010-891-010		CAP,E 47-10V
C5	87-010-891-010		CAP,E 47-10V
C6	87-010-264-080		CAP,E 100UF-10V
C9	87-010-412-080		CAP,E 10-25V
C10	87-010-891-010		CAP,E 47-10V

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
C13	87-010-412-080		CAP,E 10-25V
C14	87-010-444-080		CAP,E 22UF-50V
C22	87-010-680-010		CAP,E 33-16V
C23	87-010-264-080		CAP,E 100UF-10V
C24	87-010-264-080		CAP,E 100UF-10V
C25	87-010-264-080		CAP,E 100UF-10V
C35	87-010-264-080		CAP,E 100UF-10V
C38	87-015-995-010		CAP,E 4.7-50V
C44	87-010-908-010		CAP,E 220-10V
C48	87-010-891-010		CAP,E 47-10V
C50	87-010-891-010		CAP,E 47-10V
C70	87-010-264-080		CAP,E 100UF-10V<U,HE>
C72	87-010-264-080		CAP,E 100UF-10V<U,HE>
C74	87-010-264-080		CAP,E 100UF-10V
C81	87-016-073-080		CAP,E 1-50V<U>
C85	87-016-073-080		CAP,E 1-50V
C100	87-010-891-010		CAP,E 47-10V
C101	87-010-035-010		CAP,E 2.2-50V
C102	87-010-035-010		CAP,E 2.2-50V
C126	87-016-459-080		CAP,E 470-10V
C132	87-016-459-080		CAP,E 470-10V
FB1	S1-8A0-010-100		INDUCTOR,FB35RHTYPE<U>
FB2	S1-8A0-010-100		INDUCTOR,FB35RHTYPE<U>
FT1	S1-201-351-000		CABLE,FFC 14P
FT2	S1-201-361-000		CABLE,FFC 15P
SFR1	SR-V10-360-000		SFR,10K
SFR2	SR-V10-480-000		SFR,100K
SFR4	SR-V10-480-000		SFR,100K
X1	S2-900-312-000		CERA,RESO 16.93M2G

PT C.B

	S2-046-310-000		HOLDER,FUSE
⚠ F701	S4-001-610-000		FUSE,3.15A-250V<EXCEPT U>
⚠ F701	S4-001-510-000		FUSE,3.15A-250V<U>
⚠ PT1	S9-029-110-000		PT,AC 120-240<LH,HE,HR>
⚠ PT1	S9-028-810-000		PT,AC 120V<U,1U>
⚠ PT1	S9-029-010-000		PT,AC 240V<K,EE,EZ,EEZ>

INCL.DET 1 C.B

S801	87-036-292-010		SW,LEAF LSA-1135F2AU

INCL.DET 2 C.B

S802	87-036-292-010		SW,LEAF LSA-1135F2AU

CONNECTOR C.B

C1	87-016-271-080		CAP,E 22-16 BP
C2	87-016-271-080		CAP,E 22-16 BP
M1	87-045-383-010		MOT,M9I T2
M2	87-045-383-010		MOT,M9I T2
SW1	87-036-109-010		SW,PUSH SPPB 61
SW2	87-036-109-010		SW,PUSH SPPB 61
SW3	87-036-252-010		SW, PUSH SPPB 51
W1	84-ZG2-610-010		F-CABLE 2.0-2P L=150

MOTOR C.B

C11	87-016-271-080		CAP,E 22-16 BP
M11	87-045-383-010		MOT,M9I T2

PH C.B

PH21	87-026-573-010		P-SNSR,GP1S53V

SENSOR C.B

Q1	87-026-674-010		P-TR,PT4850F
Q2	87-026-674-010		P-TR,PT4850F
W2	84-ZG2-612-010		CABLE,FFC 4P L=225

LED C.B

LED41	87-070-288-010		LED,GL380
LED42	87-070-288-010		LED,GL380

CD MOTOR C.B

M20	87-045-362-019		MOT,MDN4RA3FTAS1
M21	87-045-363-019		MOT,MDN4RA3ETA1
SW1	87-036-340-019		SW,LEAF LSA-1121

CASS.DECK C.B

TRANSISTOR ILLUSTRATION

E C B

2SA952
2SA1015
2SA1296
2SC1815
2SC1923
2SC2001
2SC2240
2SD1468

E B C

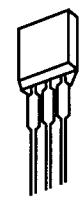
9014C
9015C

D G S

2SK246

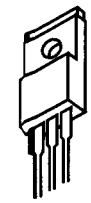
E C B

DTA114ES
DTA114YS
DTA143ES
DTA143XS
DTA144TS
DTC114TS
DTC114YS
DTC124XS
DTC143ES



D G S

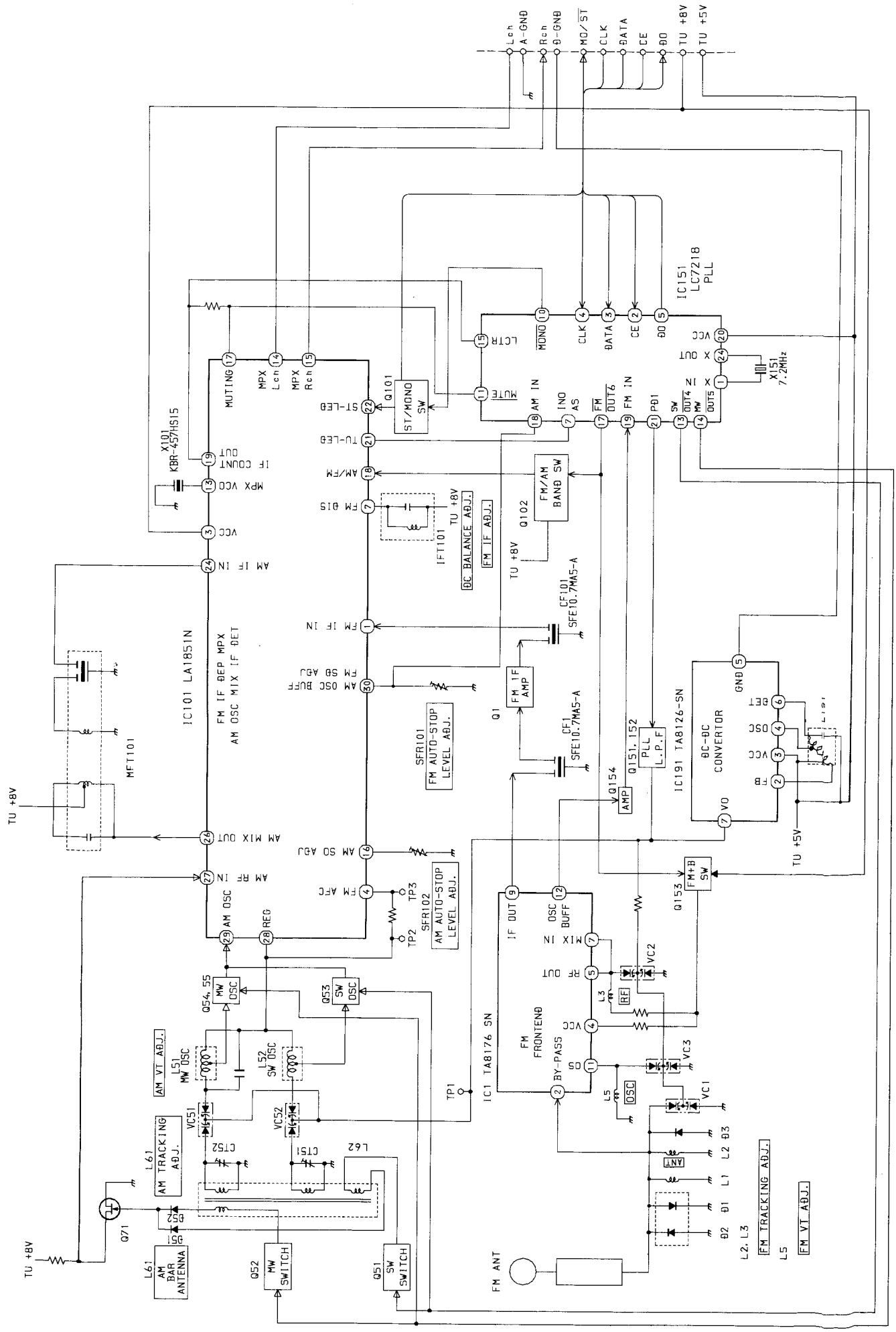
2SK161



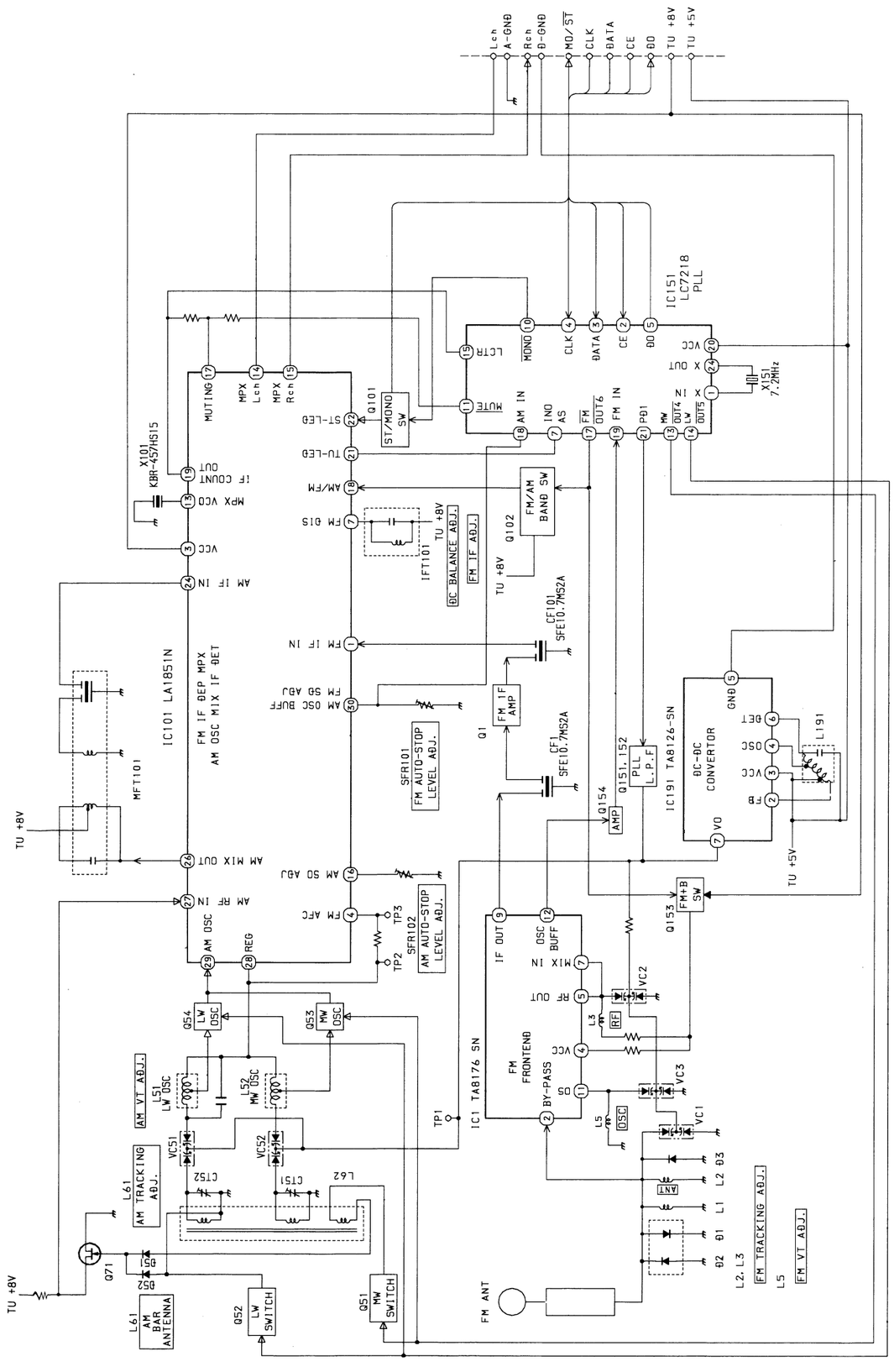
B C E

2SB1015

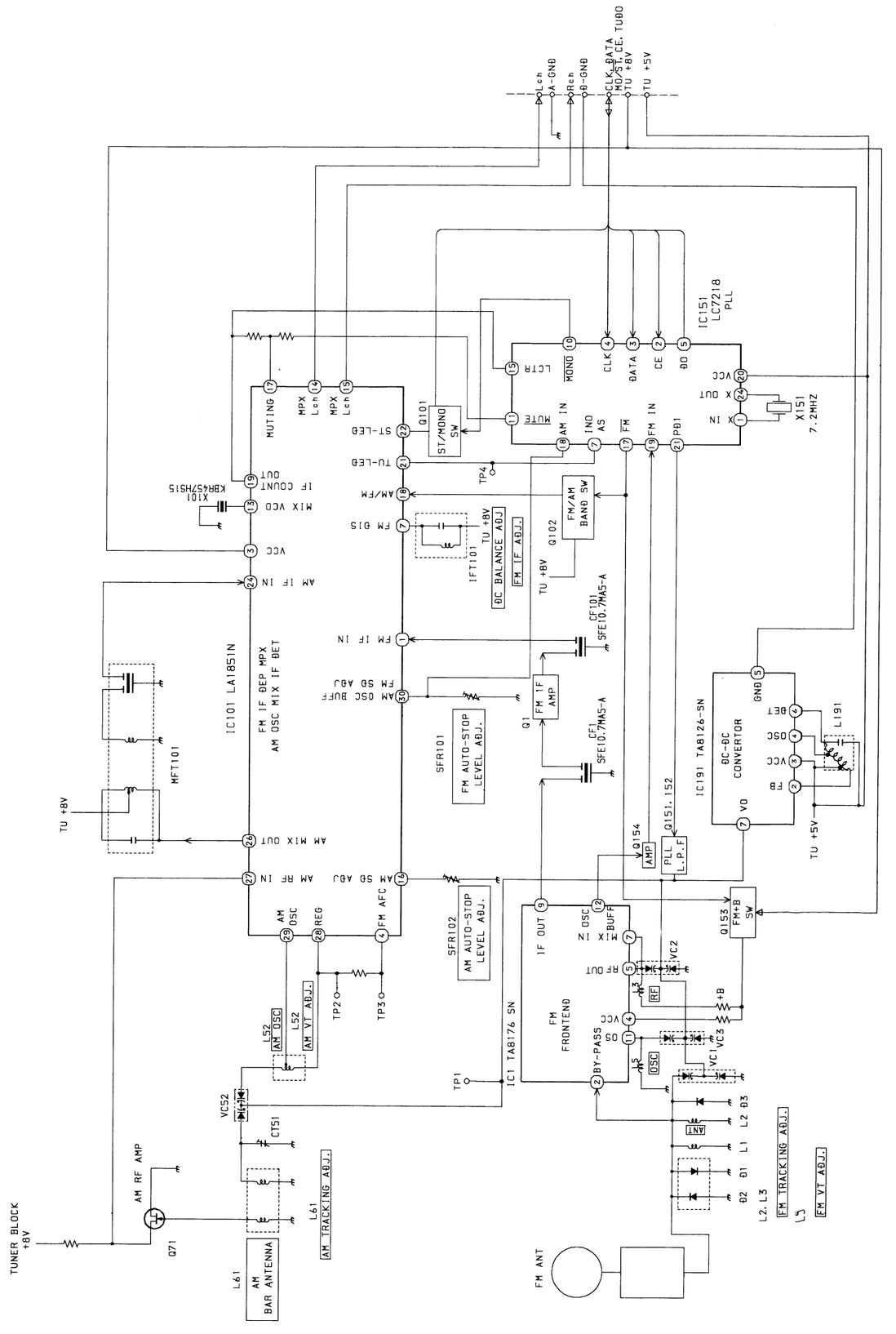
BLOCK DIAGRAM – 1 (TUNER : HE, HR)



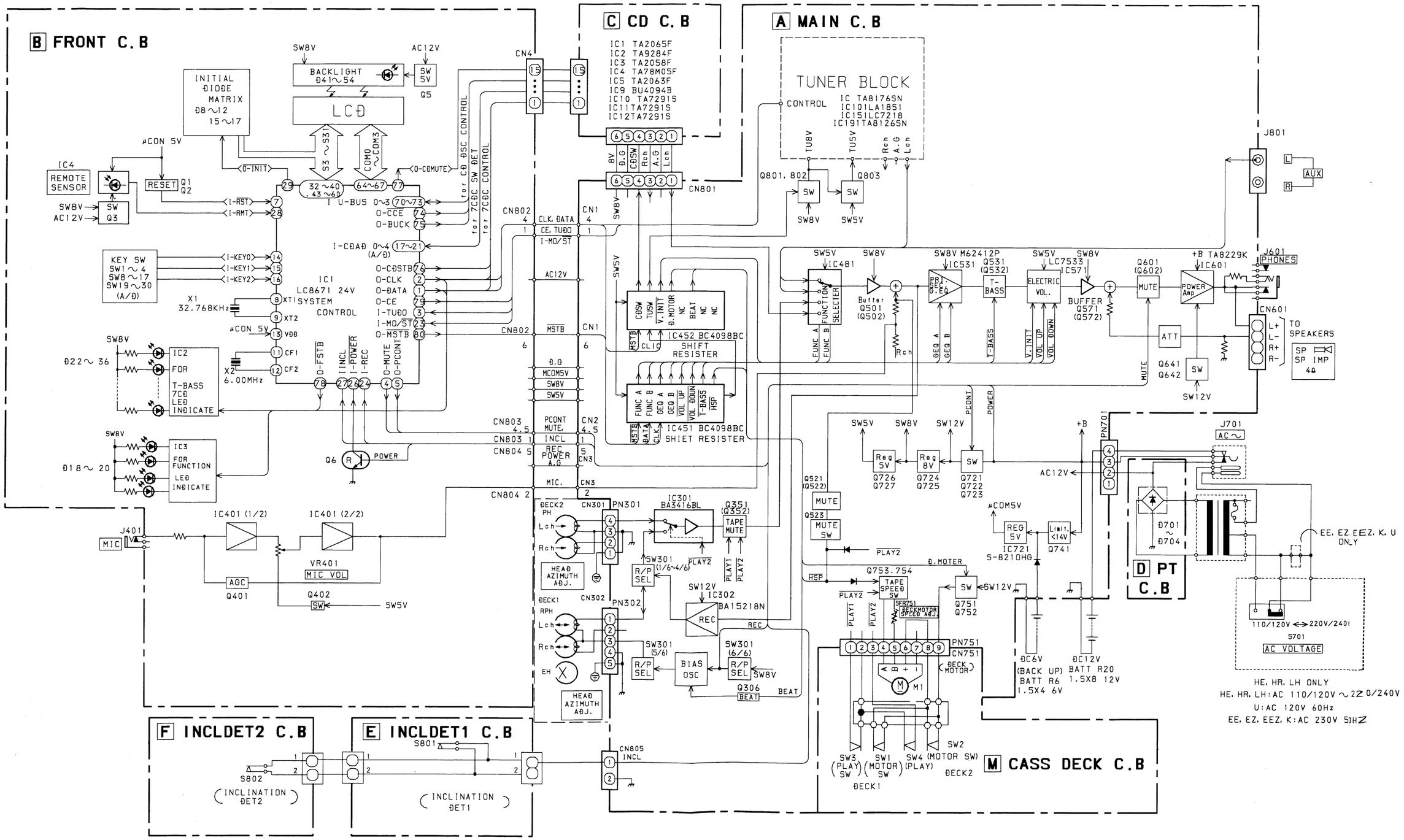
BLOCK DIAGRAM – 2 (TUNER : EE, K, Z)



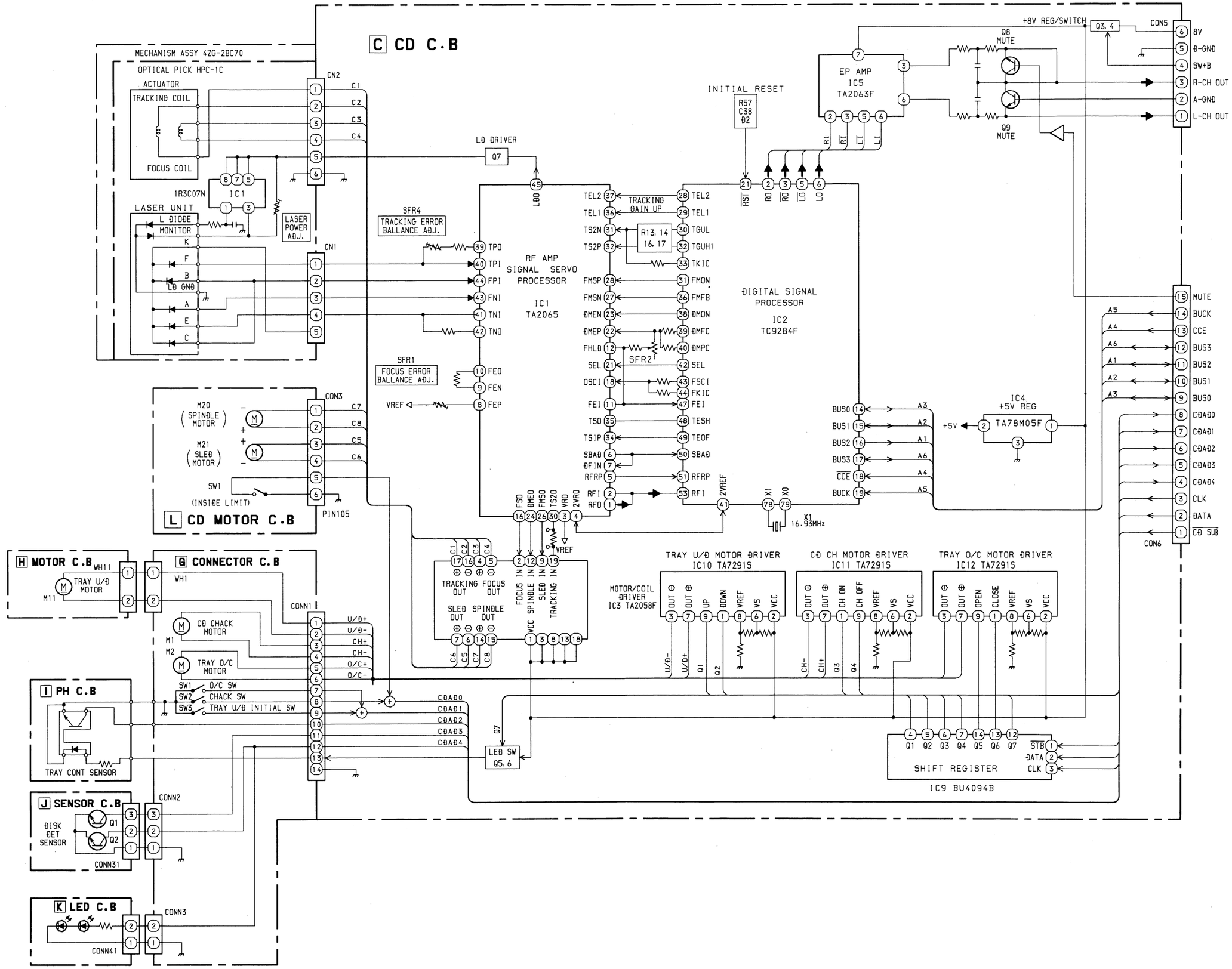
BLOCK DIAGRAM – 3 (TUNER : LH, U)

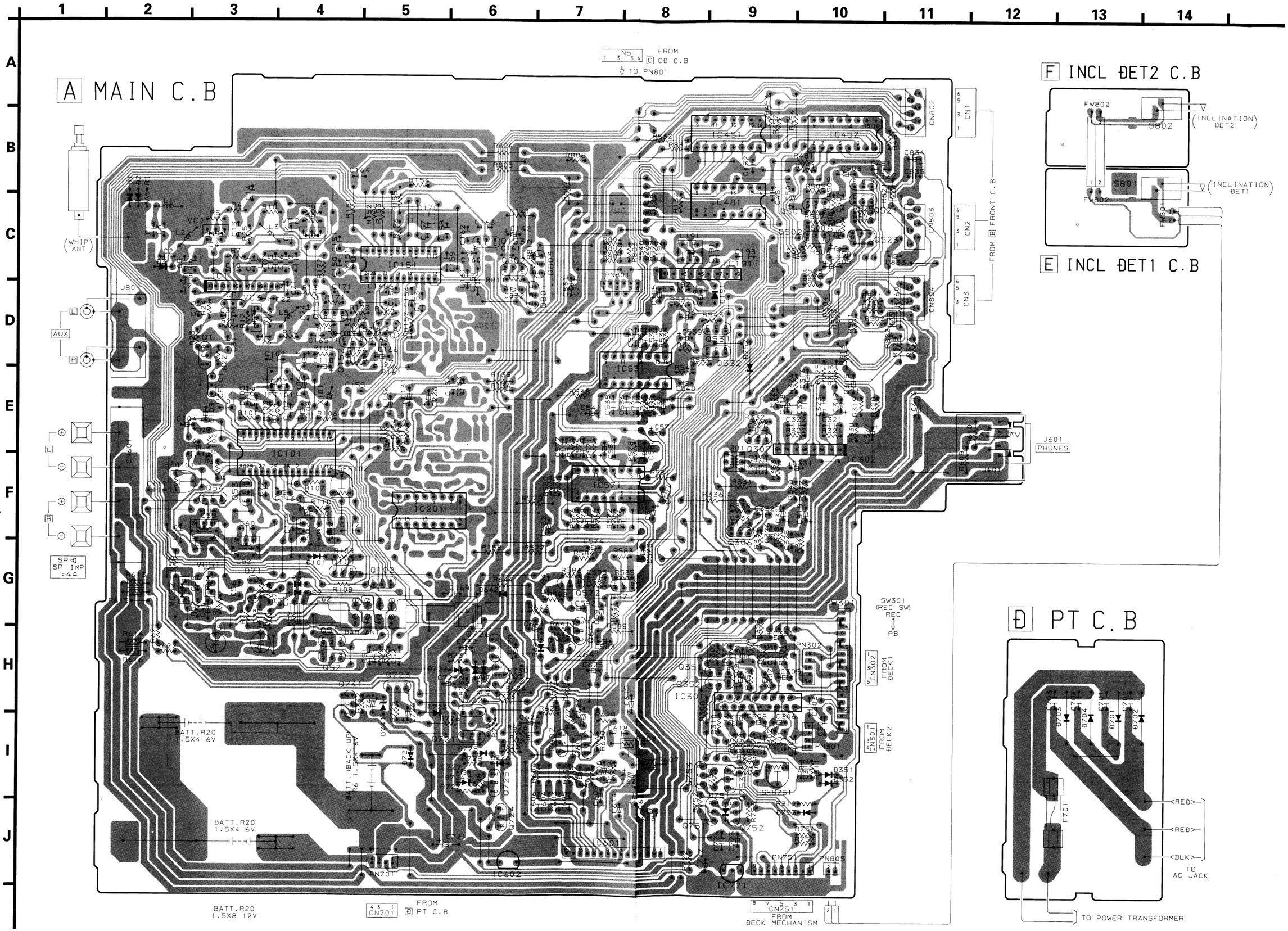


BLOCK DIAGRAM – 4 (MAIN)

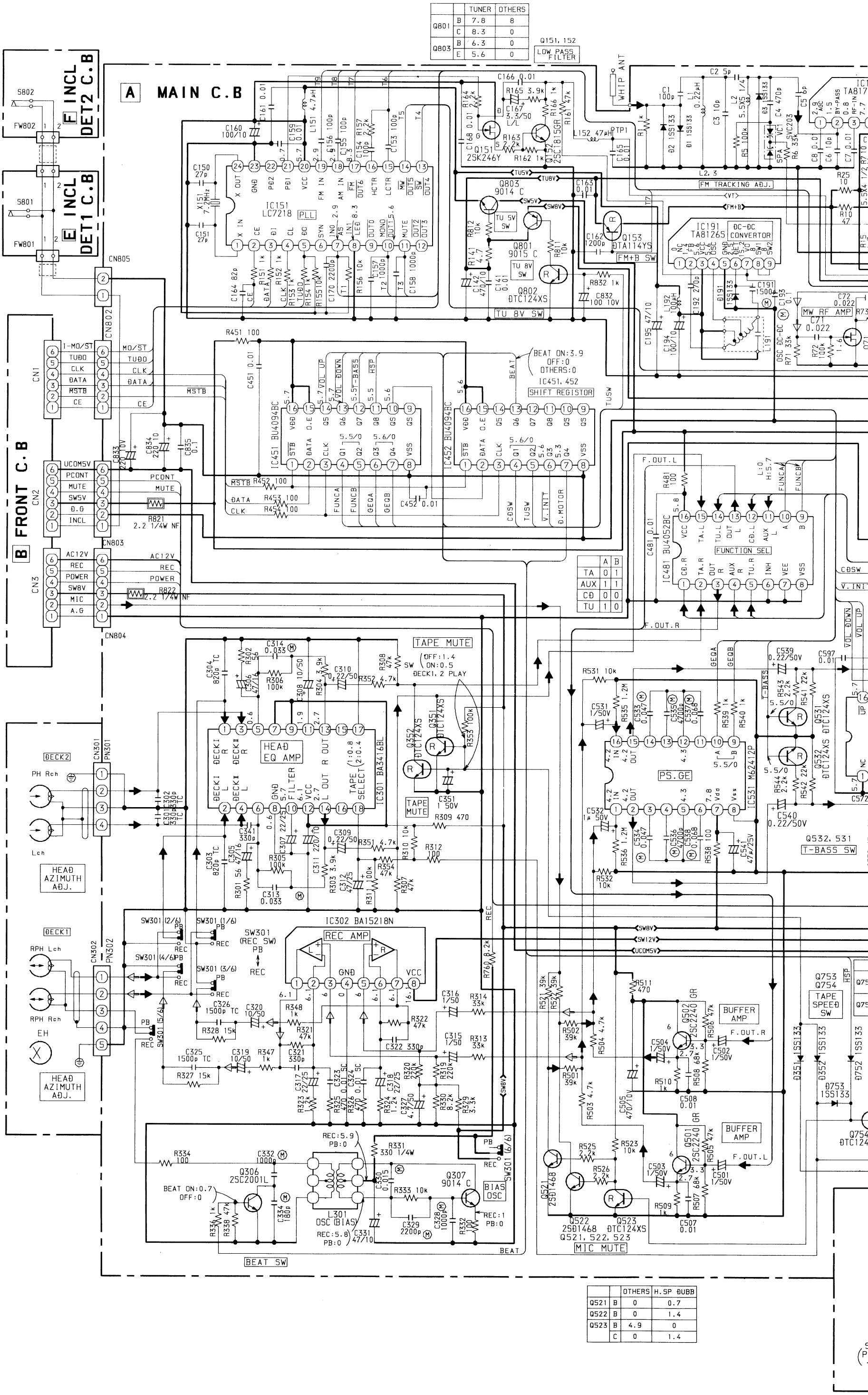


BLOCK DIAGRAM – 4 (CD)




A MAIN C.B
CN5 FROM C CĐ C.B
TO PN801
F INCL ĐET2 C.B
FW802
S802
(INCLINATION ĐET2)
S801
(INCLINATION ĐET1)
FW801
E INCL ĐET1 C.B
CN802
CN803
CN804
CN1
CN2
CN3
FROM B FRONT C.B
(WHIP ANT)
J801
AUX
L
R
J601
PHONES
SP ĐỒ
SP IMP :4Ω
IC101
IC151
IC201
IC451
IC481
IC482
IC531
IC571
IC302
IC301
IC602
IC721
SW301
(REC SW)
REC
PB
PN301
PN302
PN751
PN805
PN701
CN302
FROM ĐECK1
CN301
FROM ĐECK2
CN751
FROM ĐECK MECHANISM
BATT. R20 1.5X4 6V
BATT. (BACK UP) R6 1.5X4 6V
BATT. R20 1.5X4 6V
BATT. R20 1.5X8 12V
CN701
FROM Đ PT C.B
Đ PT C.B
ĐỒ1
ĐỒ2
ĐỒ3
ĐỒ4
F701
RED
RED
BLK
TO AC JACK
TO POWER TRANSFORMER

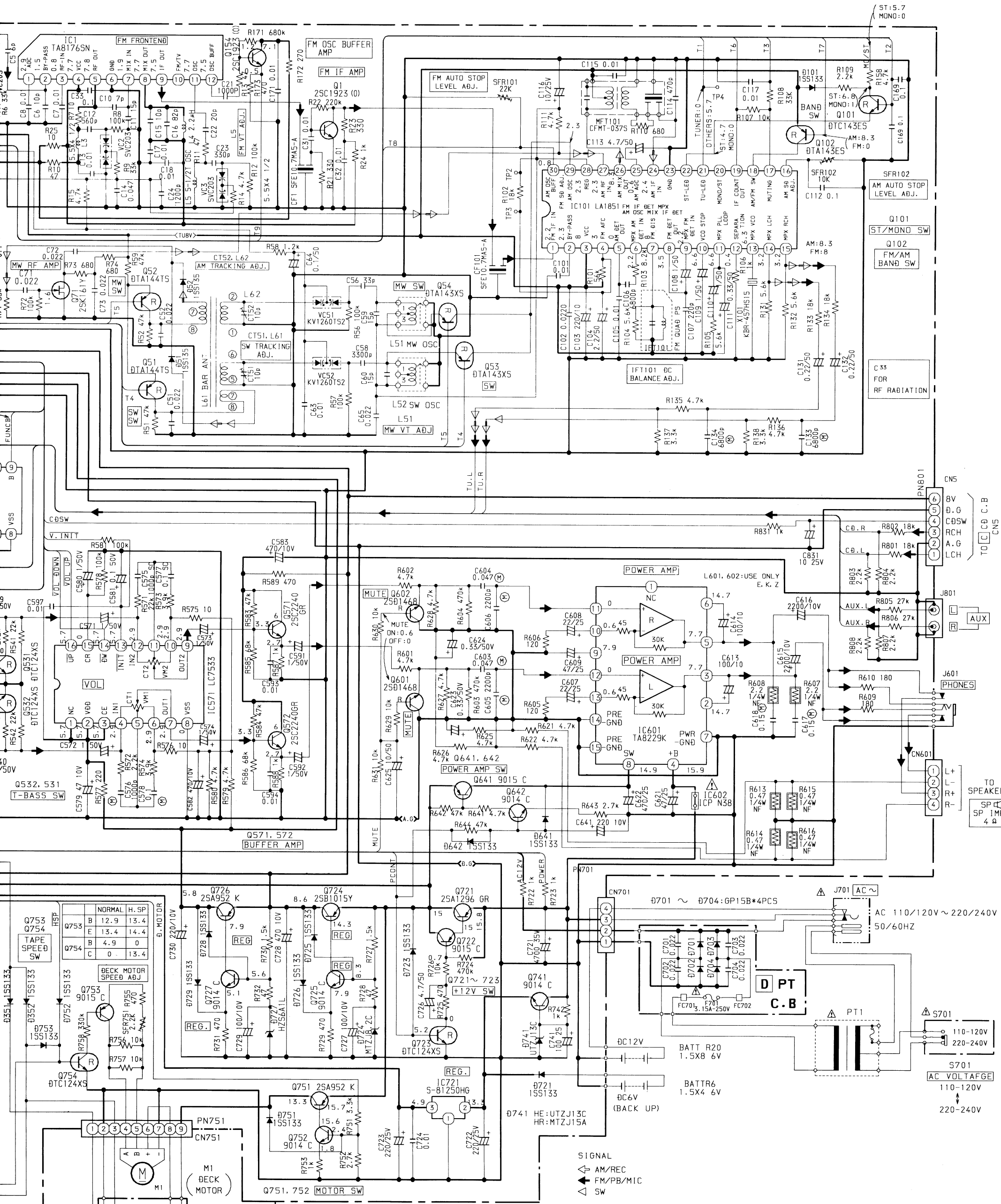
SCHEMATIC DIAGRAM – 1 (MAIN : HE, HR)



		TUNER	OTHERS
Q801	B	7.8	8
	C	8.3	0
Q803	B	6.3	0
	E	5.6	0

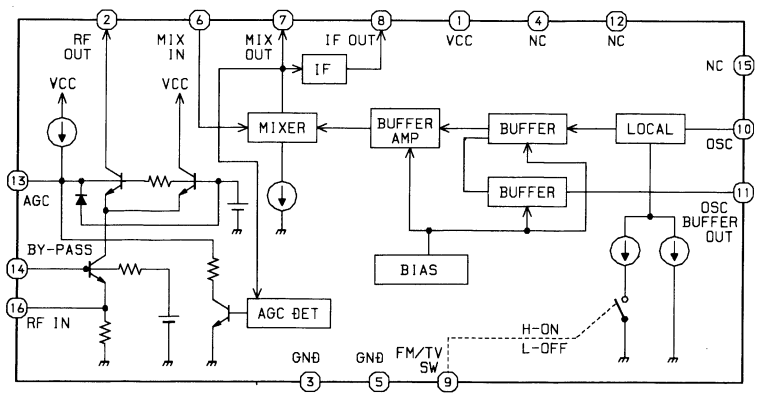
	A	B
TA	0	1
AUX	1	1
CD	0	0
TU	1	0

		OTHERS	H.SP DUBB
Q521	B	0	0.7
Q522	B	0	1.4
Q523	B	4.9	0
	C	0	1.4

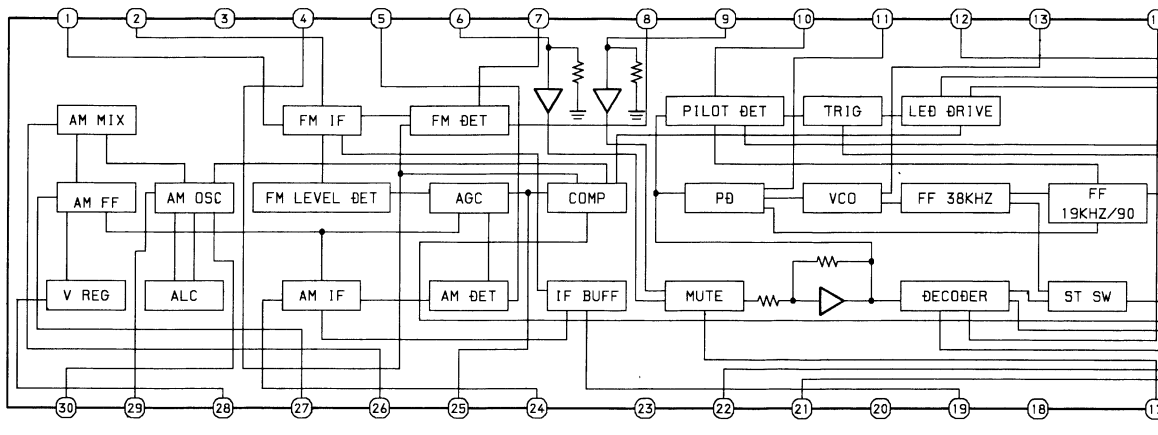

IC1 TA8176SN
FM FRONTEND
FM OSC BUFFER AMP
FM IF AMP
FM AUTO STOP LEVEL ADJ.
IC101 LA1851 FM IF DET MPX AM OSC MIX IF DET
MFT101 CFMT-037S
IFT101 IFT101L
IFT101 DC BALANCE ADJ.
BAND SW
Q101 DTC143ES
Q102 DTA143ES
SFR102 AM AUTO STOP LEVEL ADJ.
Q101 ST/MONO SW
Q102 FM/AM BAND SW
C33 FOR RF RADIATION
MW RF AMP
MW SW
AM TRACKING ADJ.
SW TRACKING ADJ.
L51 MW OSC
L52 SW OSC
L51 MW VT ADJ
L61 BAR ANT
VOL
IC571 LC7533
Q571, 572 BUFFER AMP
T-BASS SW
MUTE
POWER AMP
IC601 TA8229K
L601, 602: USE ONLY E, K, Z
POWER AMP SW
Q641 9015 C
Q642 9014 C
IC602 ICP N38
PN801
CN5
J801
AUX
J601 PHONES
CN601
TO SPEAKERS
SP IMP 4 Ω
TO C.B CN5
PN701
CN701
J701 AC ~
AC 110/120V ~ 220/240V
50/60HZ
D PT C.B
PT1
S701
S701 AC VOLTAFGE
110-120V
220-240V
BATT R20 1.5X8 6V
BATTR6 1.5X4 6V
DC12V
DC6V (BACK UP)
Q751, 752 MOTOR SW
Q726 2SA952 K
Q724 2SB1015Y
Q721 2SA1296 GR
Q722 9015 C
Q723 DTC124XS
Q741 9014 C
Q751 2SA952 K
Q752 9014 C
Q753 9015 C
Q754 DTC124XS
IC721 S-81250HG
TAPE SPEED SW
DECK MOTOR SPEED ADJ
M1 DECK MOTOR
M CASS DECK C.B
SW3 (PLAY) SW1 (MOTOR SW) SW4 (PLAY) SW2 (MOTOR SW)
DECK1 DECK2
SIGNAL
AM/REC
FM/PB/MIC
SW

IC BLOCK DIAGRAM – 1

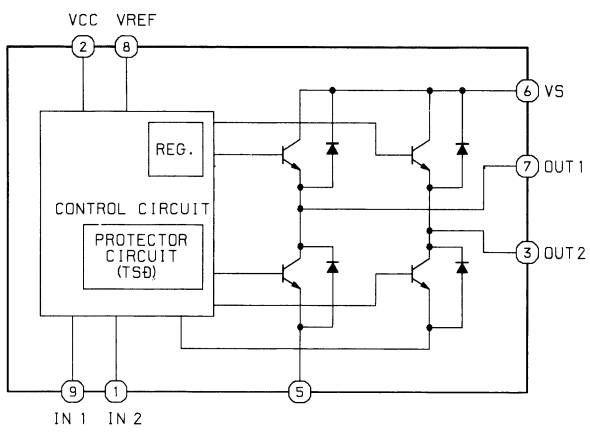
IC, TA8176SN



IC, LA1851N



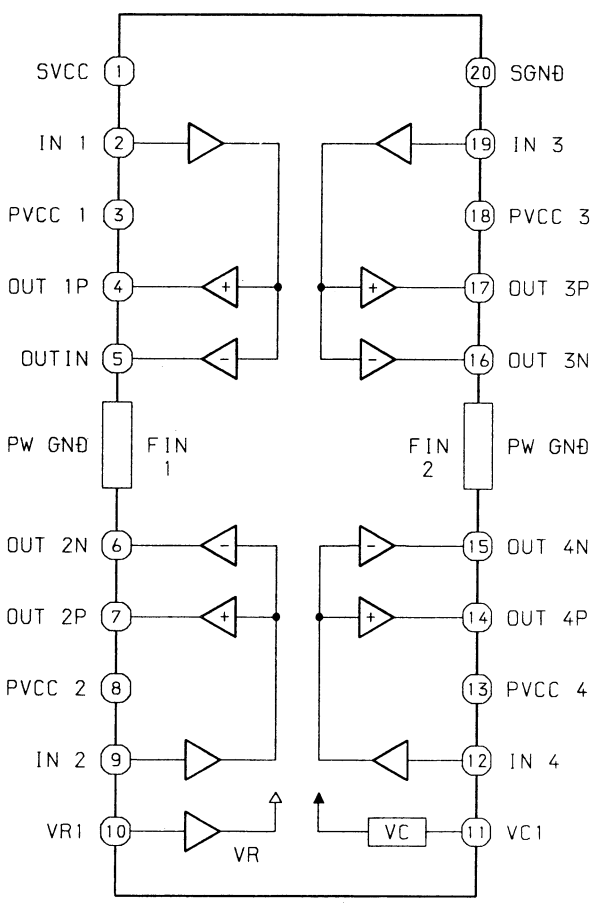
IC, TA7291S



INPUT		OUTPUT		MOĐE
IN1	IN2	OUT1	OUT2	
0	0	∞	∞	STOP
1	0	H	L	CW
0	1	L	H	CCW
1	1	L	L	BRAKE

∞ : HI IMPEĐANCE
NOTE : INPUT "H" ACTIVE

IC, TA2058F



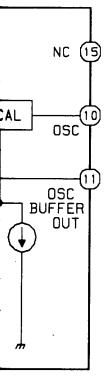
IC, BU4094BCF

TRUTH TABLE

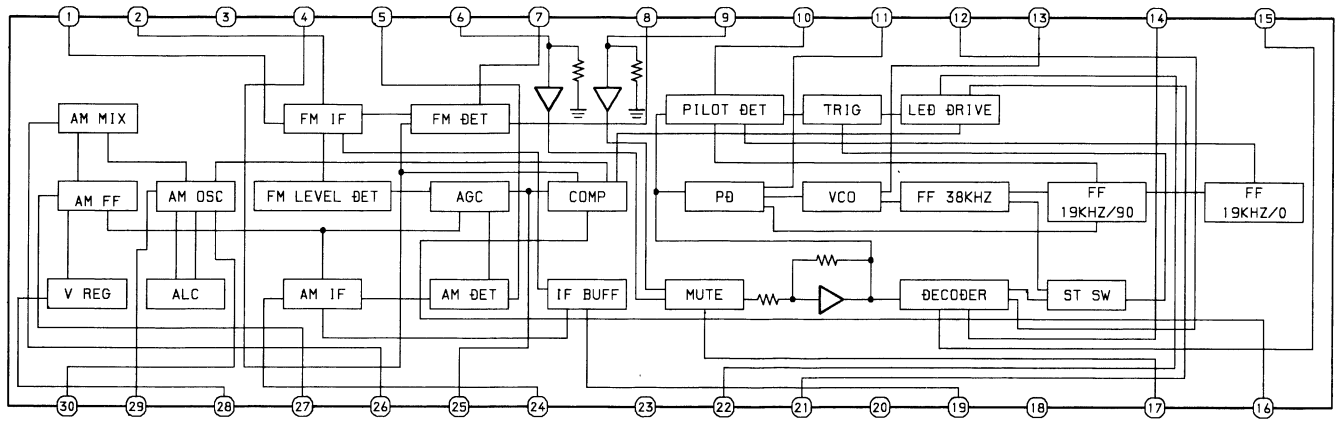
CLOCK	OUTPUT ENABLE	STROBE	ĐATA	PARALLEL OUTPUTS		SERIAL OUTPUTS	
				Q1	Qn	Qs	Q's
↑	L	X	X	Z	Z	Q7	NO Chg.
↓	L	X	X	Z	Z	No Chg.	Qs
↑	H	L	X	No Chg.	No Chg.	Q7	No Chg.
↑	H	H	L	L	Qn−1	Q7	No Chg.
↑	H	H	H	H	Qn−1	Q7	No Chg.
↓	H	X	X	No Chg.	No Chg.	No Chg.	Qs

Z=High Impedance
X=Đon't Care

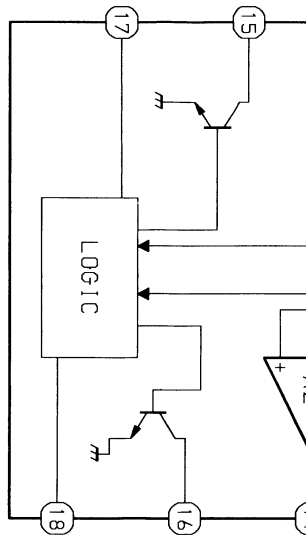
WIRING – 2 (MAIN : EE, K, EZ)



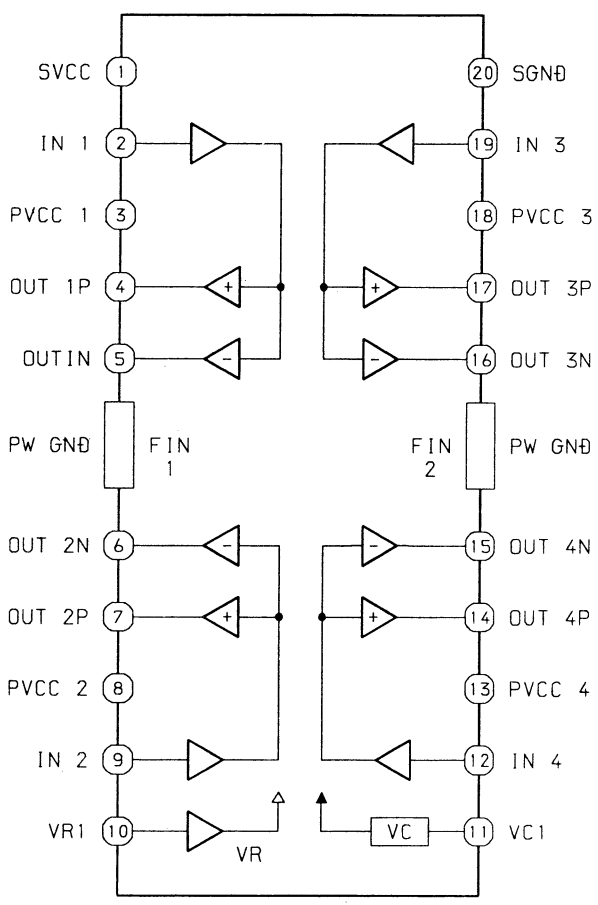
IC, LA1851N



IC, BA3416BL



IC, TA2058F

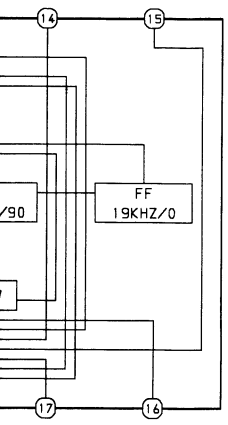


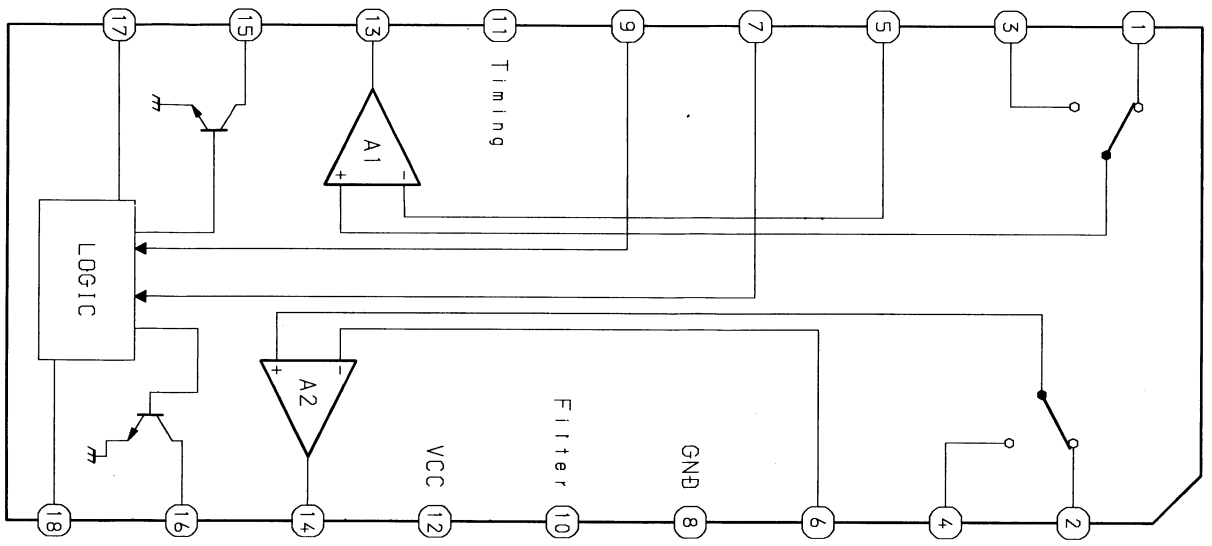
SERIAL OUTPUT

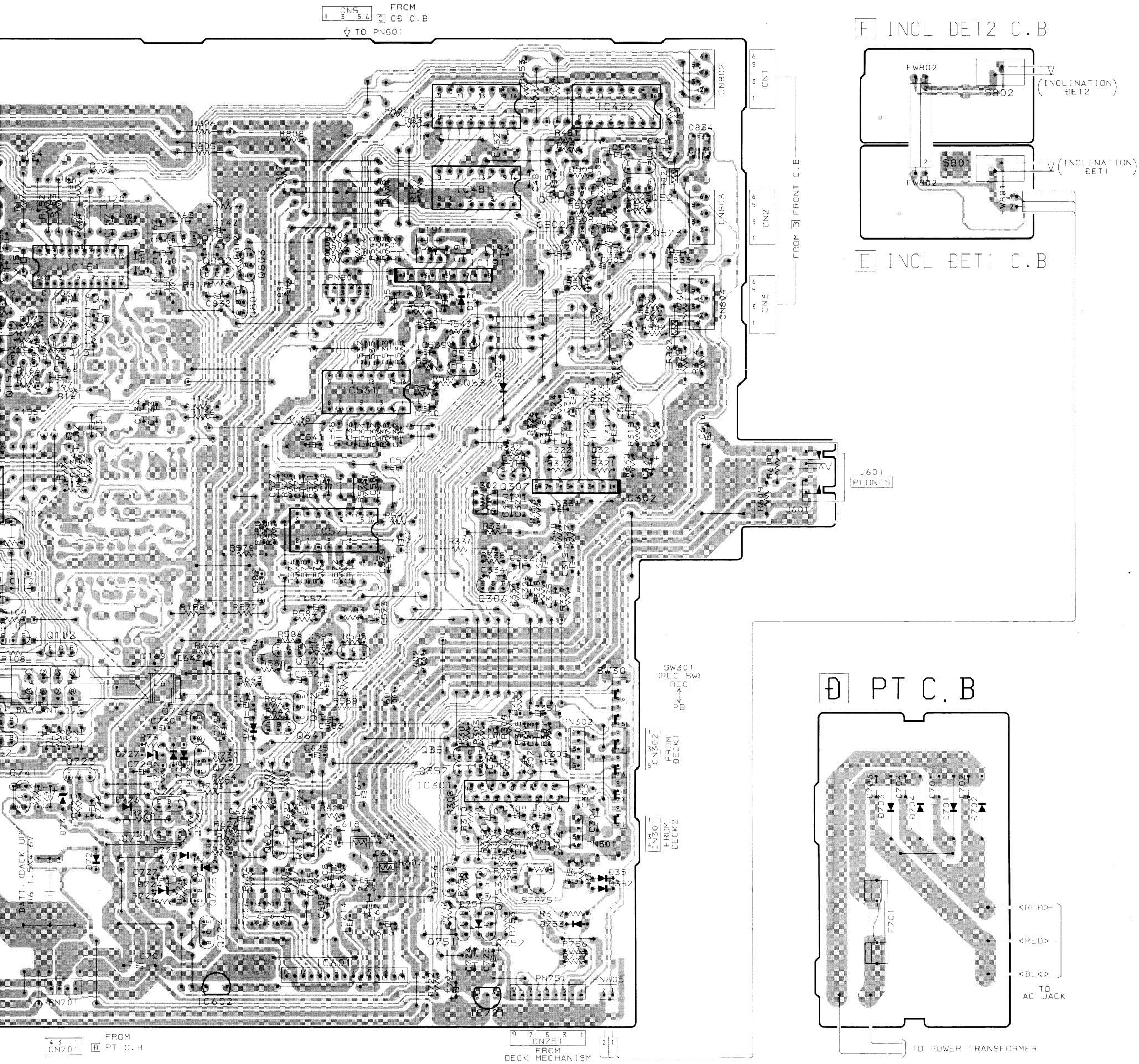
L OUTPUTS	
	Q's
	NO Chg.
.	Qs
	No Chg.
	No Chg.
	No Chg.
.	Qs

WIRING – 2 (MAIN : EE, K, EZ)

IC, BA3416BL







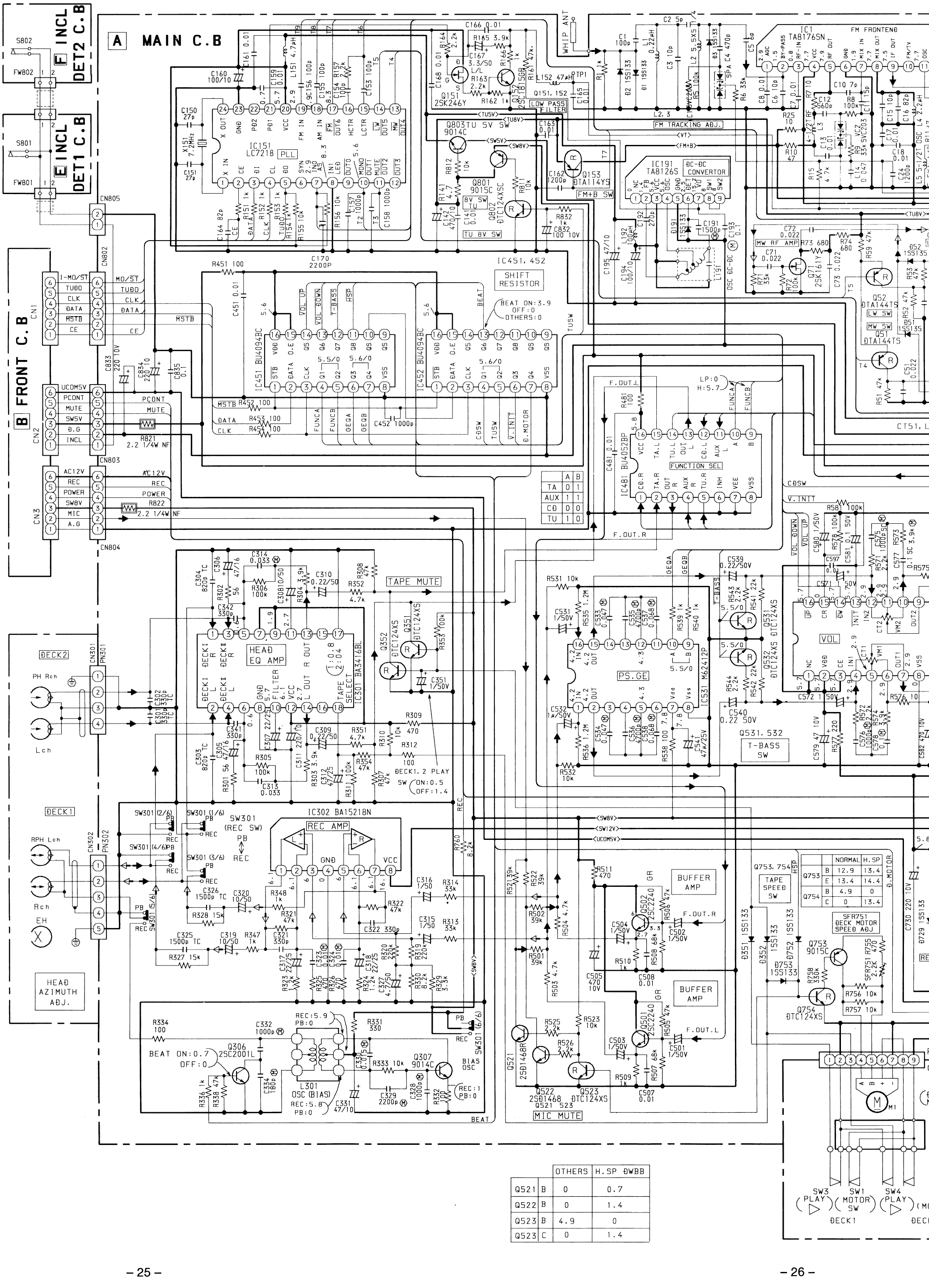
F INCL DET2 C.B

E INCL DET1 C.B

D PT C.B

SCHEMATIC DIAGRAM – 2 (MAIN : EE, K, EZ)

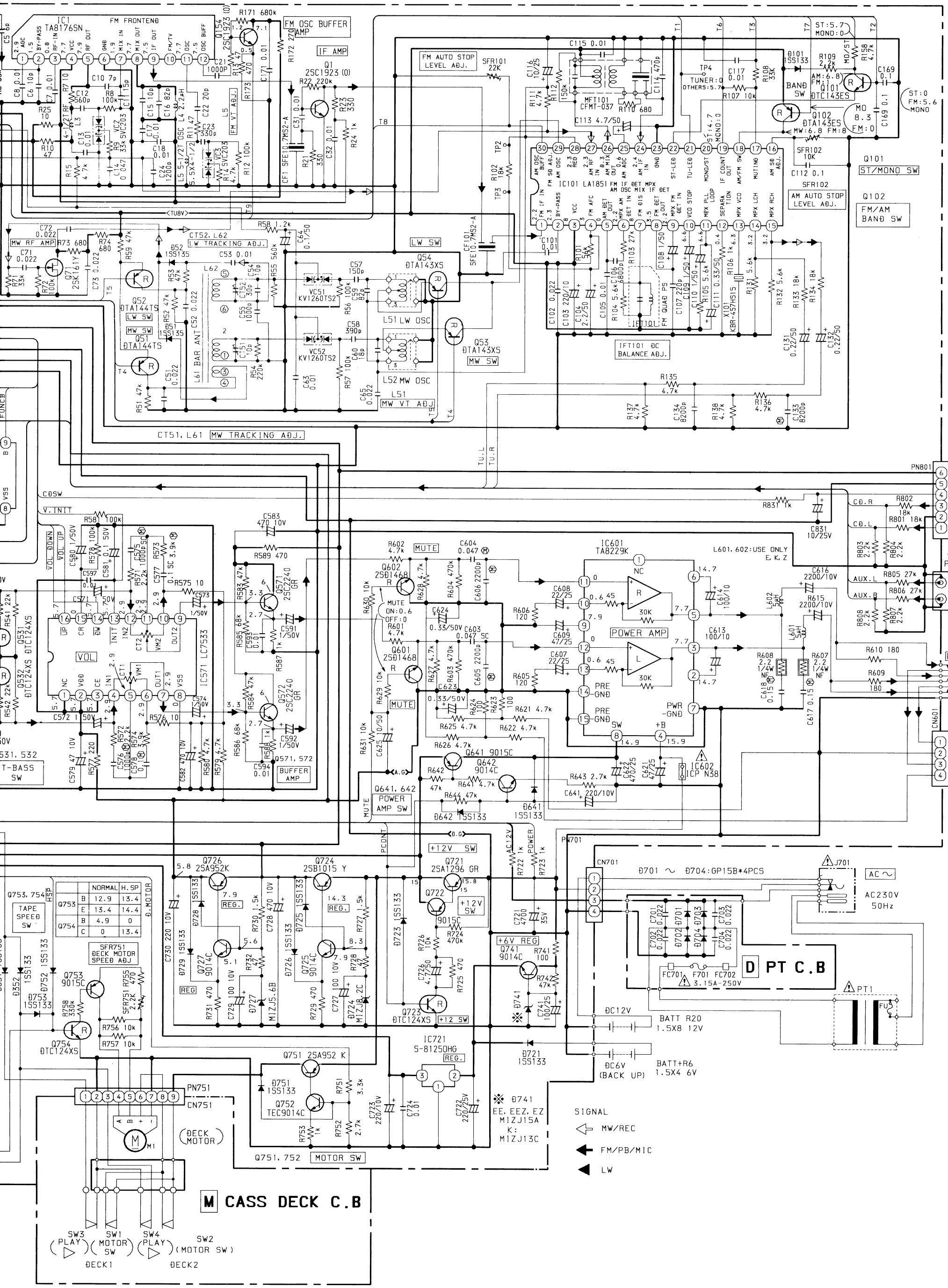
		TUNER	OTHERS
Q801	B	7.8	8
	C	8.3	0
Q803	B	6.3	0
	E	5.6	0



		A	B
TA		0	1
AUX		1	1
CD		0	0
TU		1	0

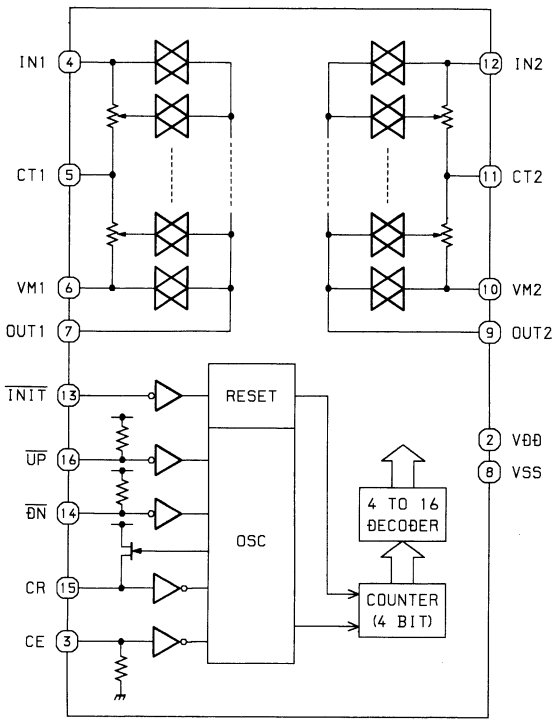
		NORMAL	H.SP
Q753	B	12.9	13.4
	E	13.4	14.4
Q754	B	4.9	0
	C	0	13.4

		OTHERS	H.SP DWBB
Q521	B	0	0.7
Q522	B	0	1.4
Q523	B	4.9	0
Q523	C	0	1.4

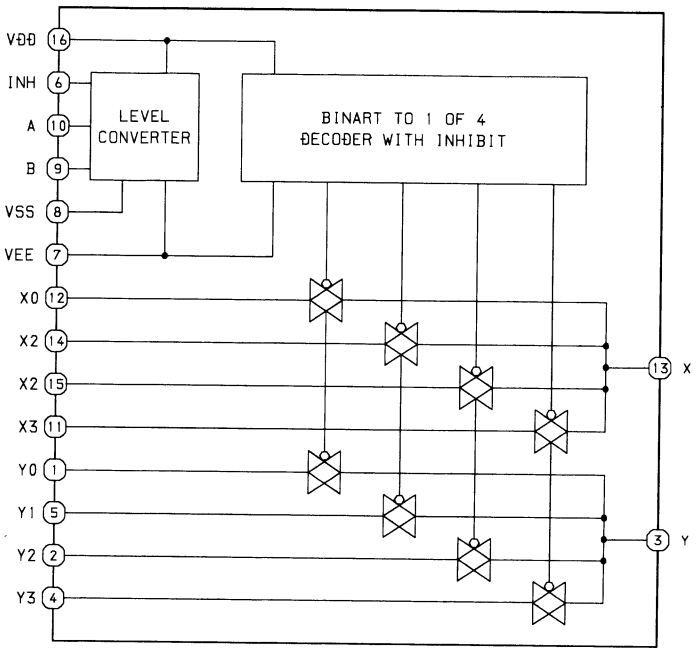

IC1 TA8176SN FM FRONTEND
FM OSC BUFFER AMP
IF AMP
FM AUTO STOP LEVEL ADJ.
IC101 LA1851 FM IF DET MPX AM OSC MIX IF DET
IFT101
FM QUAD PS
IFT101 DC BALANCE ADJ.
AM AUTO STOP LEVEL ADJ.
Q101 ST/MONO SW
Q102 FM/AM BAND SW
BAND SW
MW RF AMP
LW SW
MW SW
LW TRACKING ADJ.
MW TRACKING ADJ.
MW VT ADJ.
L51 LW OSC
L52 MW OSC
L61 BAR ANT
BUFFER AMP
CT51, L61
CT52, L62
TU8V
TU.L
TU.R
VOL
IC571 LC7533
IC601 TA8229K
POWER AMP
MUTE
Q641, 642 POWER AMP SW
+12V SW
+6V REG
IC721 S-81250HG REG.
Q751, 752 MOTOR SW
IC602 ICP N38
J801 PIN JACK
J601 PHONES
TO SPEAKERS
SP SP IMP 4Ω
TO C.B CN5
D PT C.B
M CASS DECK C.B
DECK MOTOR
SFR751 DECK MOTOR SPEED ADJ
TAPE SPEED SW
SIGNAL
MW/REC
FM/PB/MIC
LW

IC BLOCK DIAGRAM – 2

IC, LC7533



IC, BU4052BC

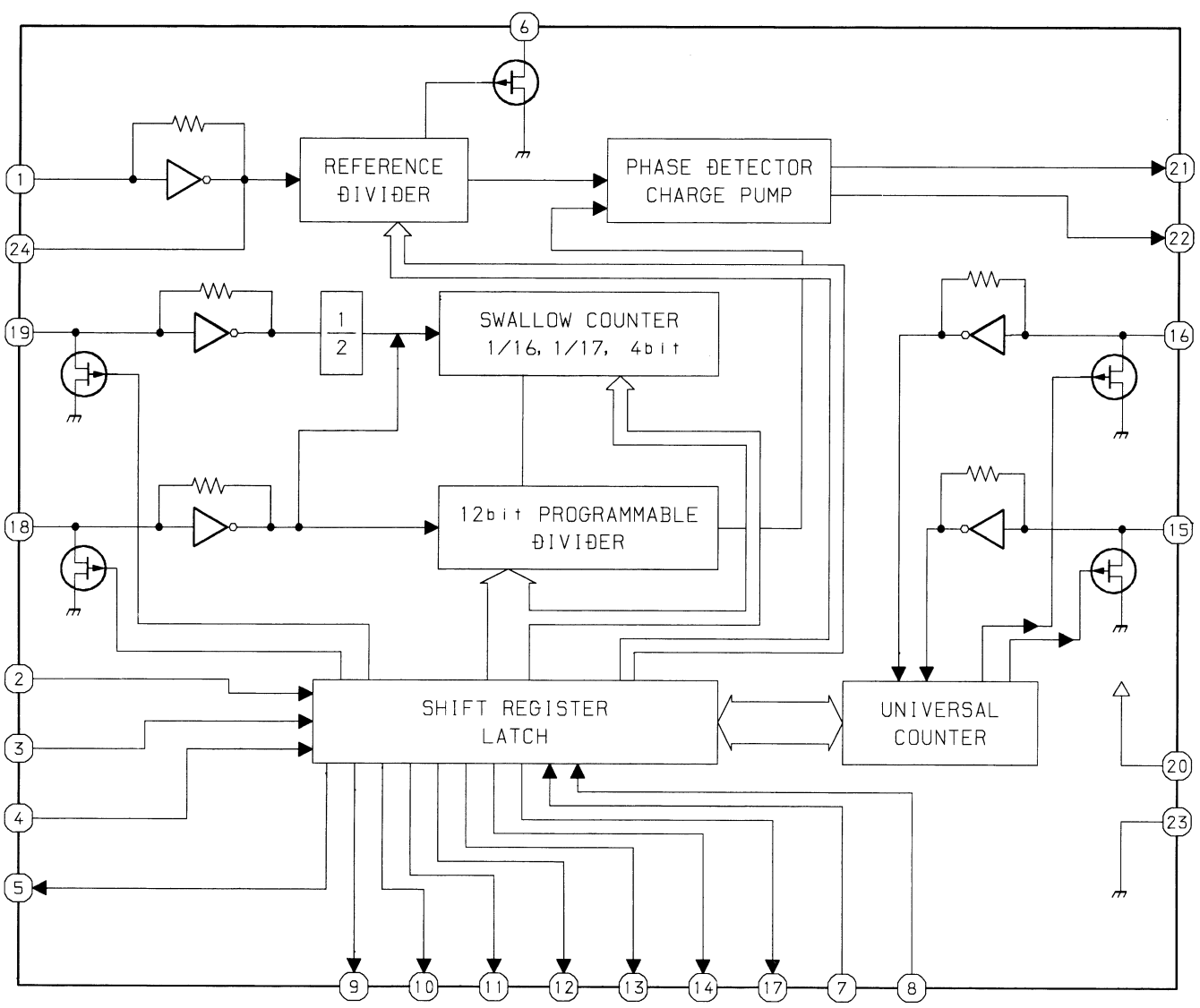


TRUTH TABLE

INHIBIT	A	B	NO SWITCH
L	L	L	X0 Y0
L	H	L	X1 Y1
L	L	H	X2 Y2
L	H	H	X3 Y3
H	X	X	NONE

X:DON'T CARE.

IC, LC7218

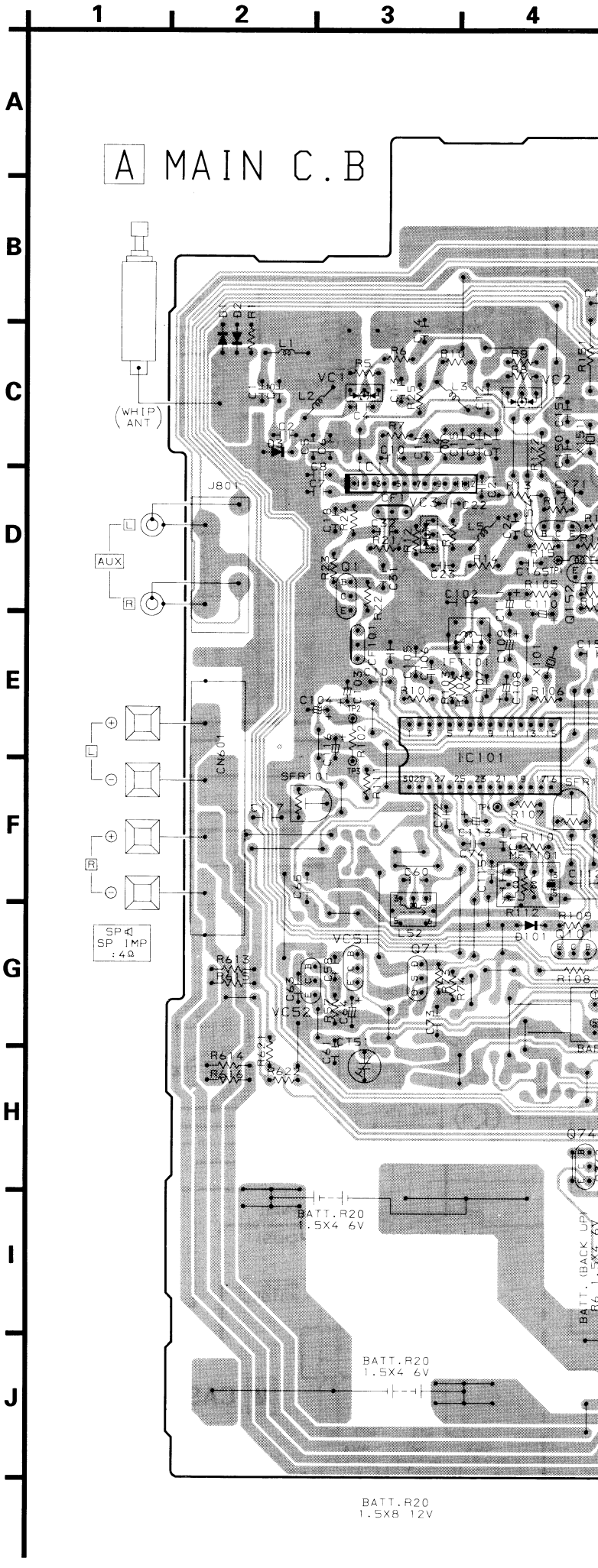


AD PO

(1) I-CD S
CD SW
LIMIT
CHAC
Voltag

VOL
5.
4.
3.
3.
0.

WIRING – 3 (MAIN : LH, U)



AD PORT INPUT LEVEL

① I-CD SW2

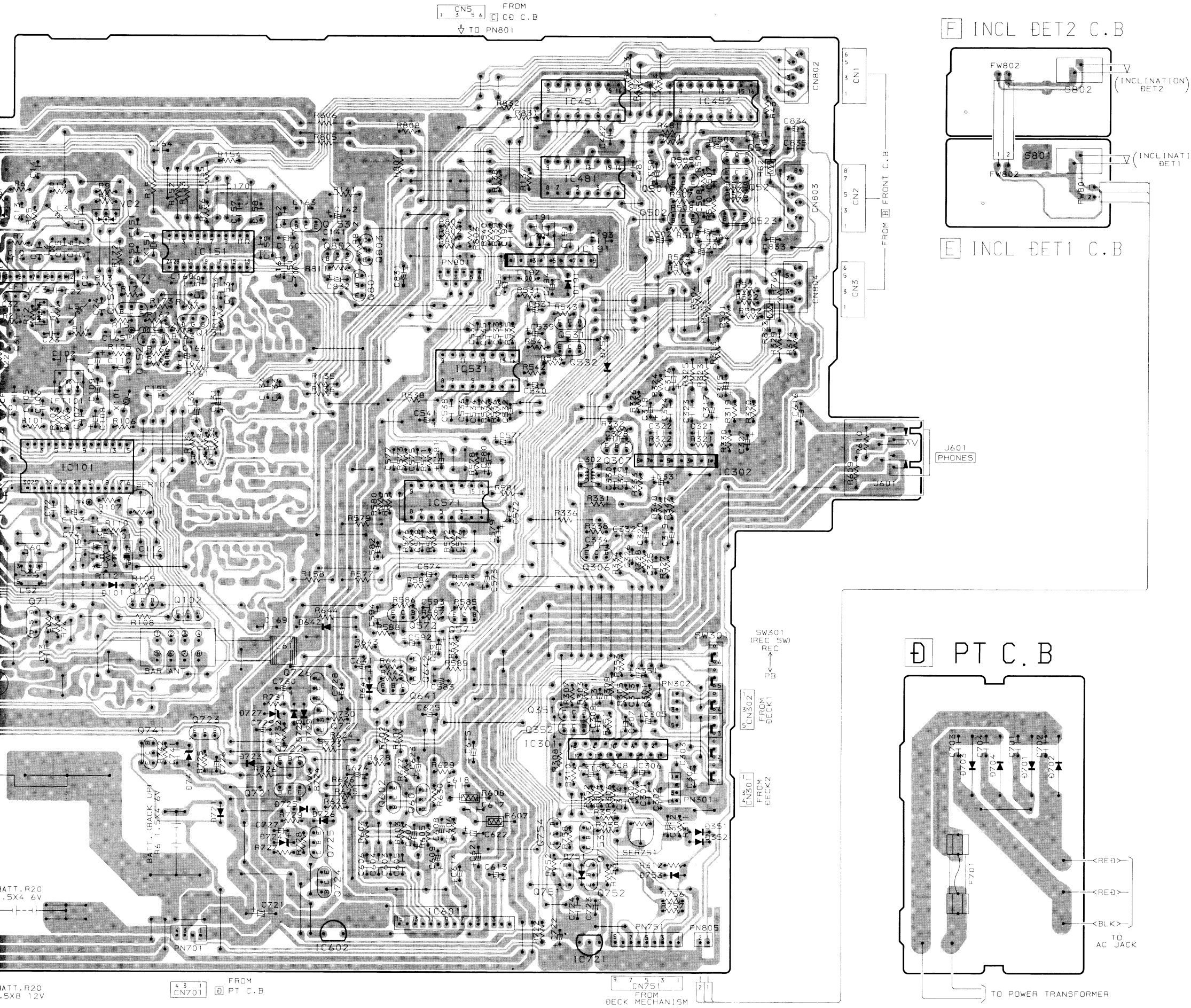
CD SWITCH (LIMIT SW, CHACK SW) AD INPUT
LIMIT SW : Switch on at the most internal circle.
CHACK SW : Switch on when chacking.
Voltage must be within when below mode.

VOLTAGE	AD		LIMIT-SW	CHACK-SW
	Hex	Dec		
5.60	FF	255	OFF	OFF
4.95	E 1	225	ON	OFF
3.83	AE	174	OFF	ON
3.08	8C	140	ON	ON
0.00	00	0		

② I-CD SW1

CD SWITCH (OPEN SW, BOX SW) AD INPUT
OPEN SW : Switch off when open or close.
BOX SW : Switch on when the box is the most below position.
Voltage must be within when below mode.

VOLTAGE	AD		LIMIT-SW	CHACK-SW
	Hex	Dec		
5.60	FF	255	OFF	OFF
4.95	E 1	225	ON	OFF
3.83	AE	174	OFF	ON
3.08	8C	140	ON	ON
0.00	00	0		



		TUNER	OTHERS
Q801	B	7.8	8
	C	8.3	0
Q803	B	6.3	0
	E	5.6	0

A MAIN C.B

B FRONT C. B

E INCL DET2 C.B

E INCL DET1 C.B

IC1 TA81765N FM FRONTENÐ

IC151 LC7218 PLL

IC191 TA81265 ÐC-ÐC CONVERTOR

IC451, 452 SHIFT REGISTOR

IC481 BU4052BC FUNCTION SEL

IC531 M62412P PS.GE

IC301 BA3416BL HEAÐ EQ AMP

IC302 BA15218N REC AMP

Q151 2SK246Y

Q152 2SC1815GR

Q153 ÐTA114YS

Q801 9015C

Q803 9014C

Q802 ÐTC124XS

Q351, 352 TAPE MUTE

Q502 2SC2240GR BUFFER AMP

Q501 2SC2240 BUFFER AMP

Q522 2SÐ1468 R ÐTC124XS MIC MUTE

Q306 2SC2001L

Q307 9014C BIAS OSC

Q753 9015C

Q754 ÐTC124XS

Q531, 532 T-BASS SW

L301 OSC (BIAS)

FM TRACKING AÐJ.

FM+B SW

LOW PASS FILTER

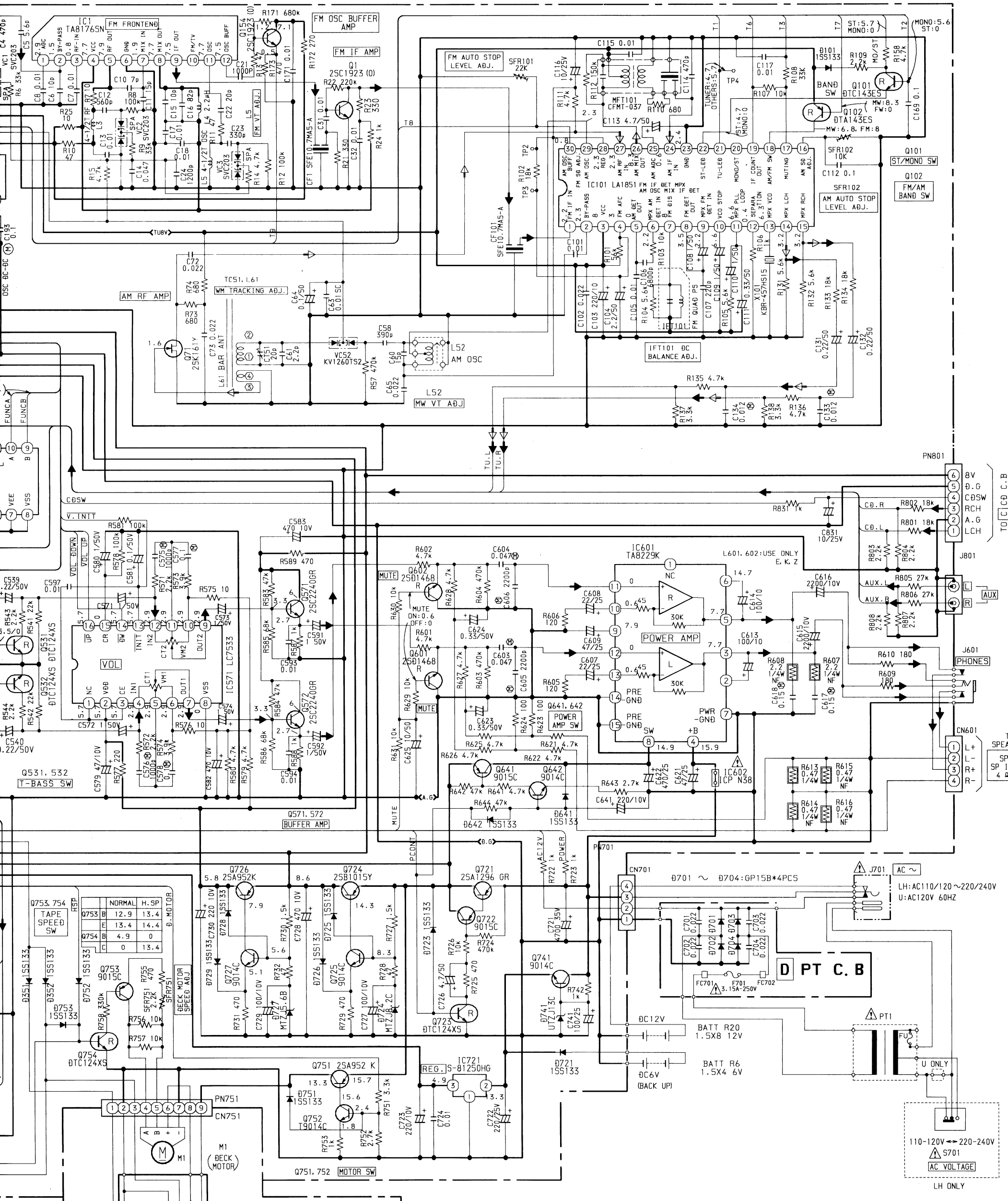
AM RF A

HEAÐ AZIMUTH AÐJ.

	A	B
TA	0	1
AUX	1	1
CÐ	0	0
TU	1	0

		NORMAL	H.SP
Q753	B	12.9	13.4
	E	13.4	14.4
Q754	B	4.9	0
	C	0	13.4

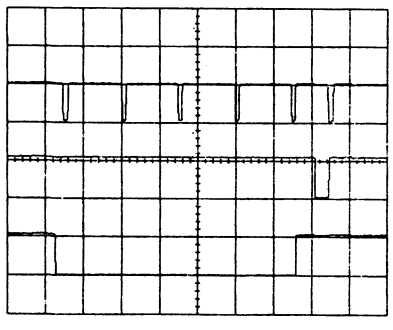
		OTHERS	H.SP ÐUBB
Q521	B	0	0.7
Q522	B	0	1.4
Q523	B	4.9	0
	E	0	1.4


IC1 TA8176SN
FM FRONTEND
FM OSC BUFFER AMP
FM IF AMP
FM AUTO STOP LEVEL ADJ.
SFR101 22K
IC101 LA1851 FM IF DET MPX AM OSC MIX IF DET
IFT101 DC BALANCE ADJ.
AM RF AMP
TC51, L61 WM TRACKING ADJ.
L61 BAR ANT
L52 AM OSC
L52 MW VT ADJ
FM VT ADJ.
AM AUTO STOP LEVEL ADJ.
SFR102
Q101 ST/MONO SW
Q102 FM/AM BAND SW
BAND SW
Q531, 532 T-BASS SW
VOL
IC571 LC7533
Q571, 572 BUFFER AMP
IC601 TA8229K
POWER AMP
Q641, 642 POWER AMP SW
IC602 ICP N38
IC721 REG. S-81250HG
PN801
CN601
J801
J601 PHONES
TO SPEAKERS
SP IMP 4Ω
AUX
PN701
CN701
J701 AC ~
LH:AC110/120~220/240V
U:AC120V 60HZ
D PT C.B
FC701 3.15A-250V
PT1
FU
U ONLY
110-120V ↔ 220-240V
S701
AC VOLTAGE
LH ONLY
BATT R20 1.5X8 12V
BATT R6 1.5X4 6V
ÐC12V
ÐC6V (BACK UP)
TAPE SPEED SW
Q753, 754
Q751, 752 MOTOR SW
DECK MOTOR SPEED ADJ.
M1 (DECK MOTOR)
M CASS DECK C.B
SW3 (PLAY) SW1 (MOTOR SW) SW4 (PLAY) SW2 (MOTOR SW)
DECK1 DECK2
TO C CD C.B CN5
CD SW
V. INIT
VOL DOWN
VOL UP
MUTE
POWER
PCONT
TU.L
TU.R
A.G
D.G
8V
LCH
RCH
CD.L
CD.R
A.G

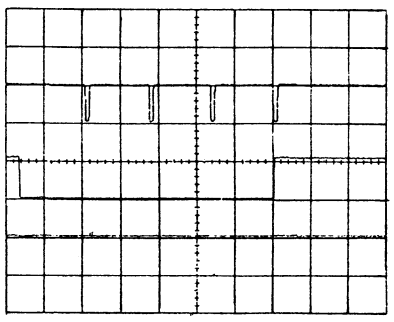
WAVEFORM - 1

③ BOX COUNT SENSOR
Tray 1 open / close

CLOSE VOLT / DIV : 5V
TIME / DIV : 200mS



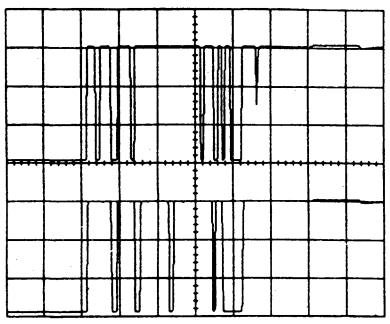
OPEN VOLT / DIV : 5V
TIME / DIV : 200mS



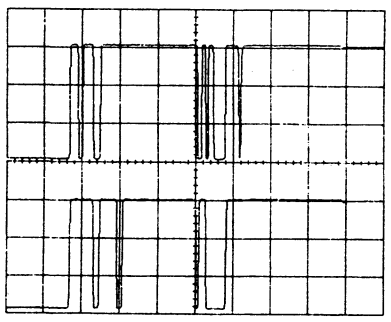
④ DISC 1

⑤ DISC 2
Signal pattern : No disc, 8 cm, 12 cm
Tray can not close when signal pattern is different.

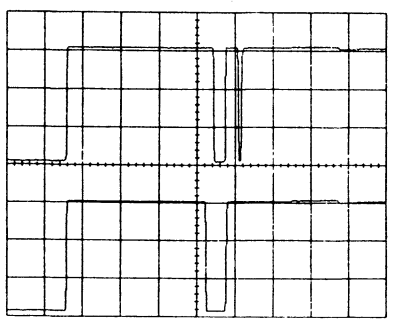
No disc VOLT / DIV : 2V
TIME / DIV : 100mS



8 cm VOLT / DIV : 2V
TIME / DIV : 100mS



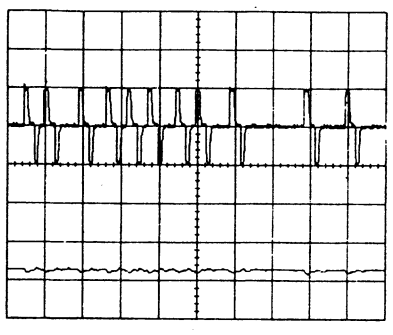
12 cm VOLT / DIV : 2V
TIME / DIV : 100mS



⑥ PDO

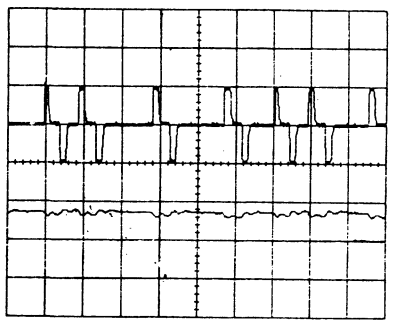
⑦ LPFO
Disc turn speed

High VOLT / DIV : 2V
TIME / DIV : 1µS



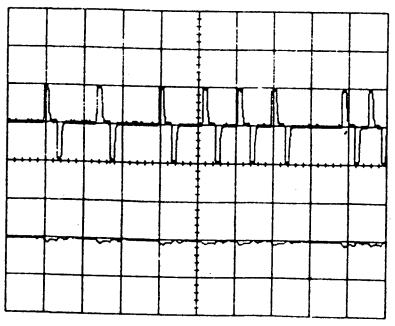
Slow

VOLT / DIV : 2V
TIME / DIV : 1µS



Normal

VOLT / DIV : 2V
TIME / DIV : 1µS

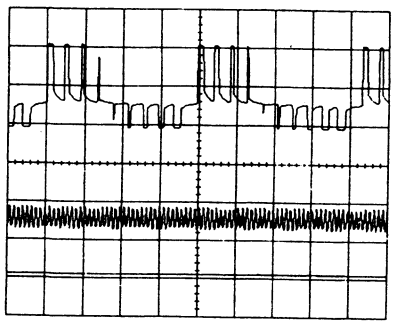


⑧ DMPC

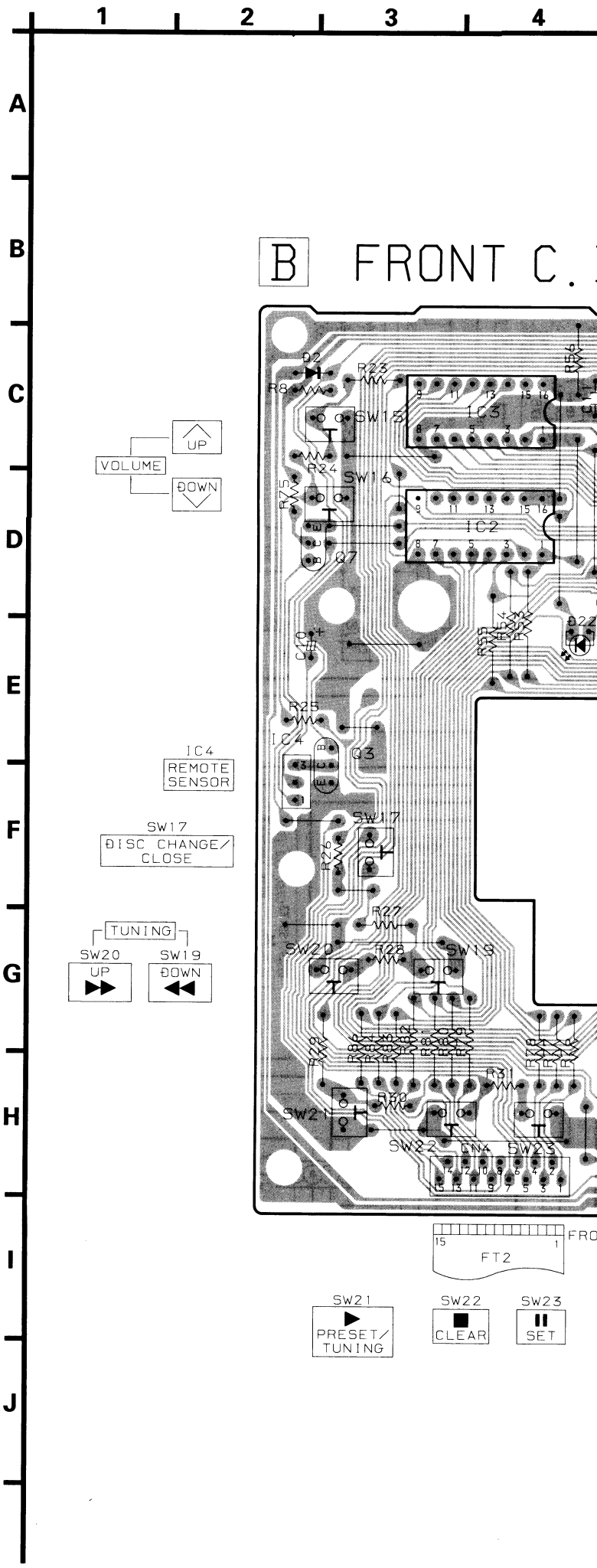
⑨ DMFC

⑩ DMEO
Spindle motor rotation speed

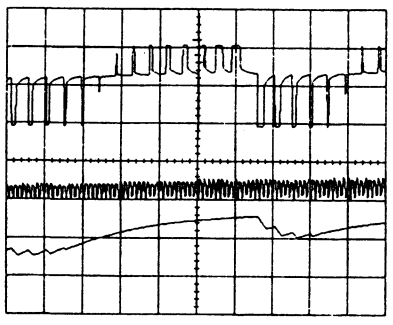
High ⑧ ⑨ VOLT / DIV : 2V
TIME / DIV : 5mS
⑩ VOLT / DIV : 1V
TIME / DIV : 5mS



WIRING – 4 (FRONT)

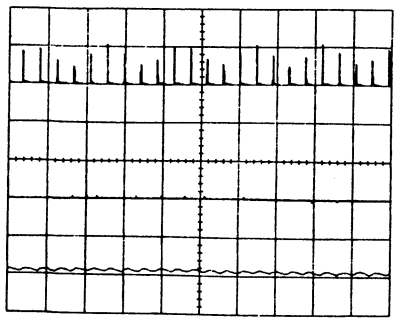


Slow ⑧ ⑨ VOLT / DIV : 2V
TIME / DIV : 5mS
⑩ VOLT / DIV : 1V
TIME / DIV : 5mS



⑧ DMPC
⑨ DMFC
⑩ DMEO

Normal ⑧ ⑨ VOLT / DIV : 2V
TIME / DIV : 5mS
⑩ VOLT : 1V
TIME / DIV : 5mS

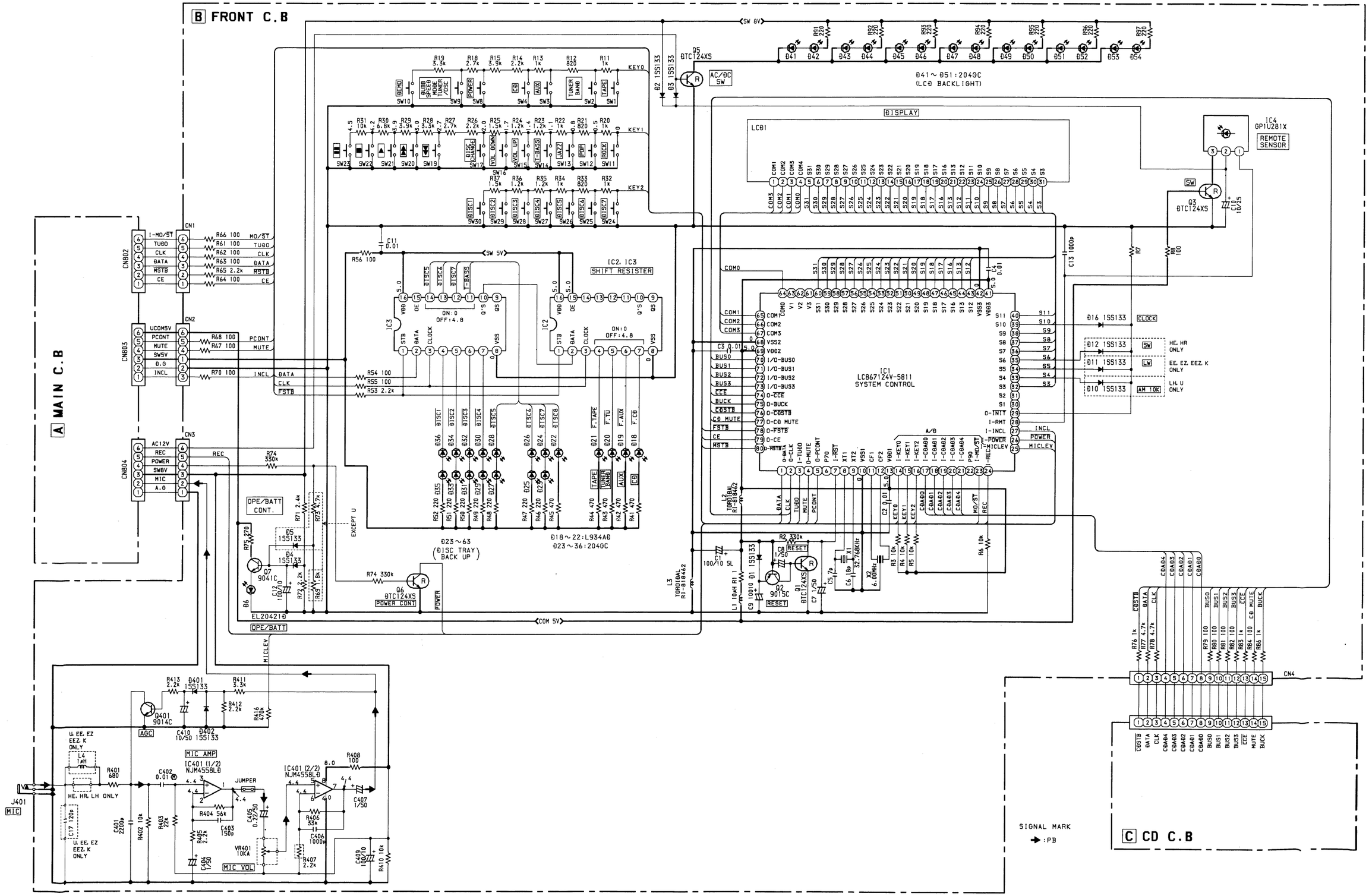


⑧ DMPC
VREF LEVEL
⑨ DMFC
VREF LEVEL
⑩ DMEO
VREF LEVEL

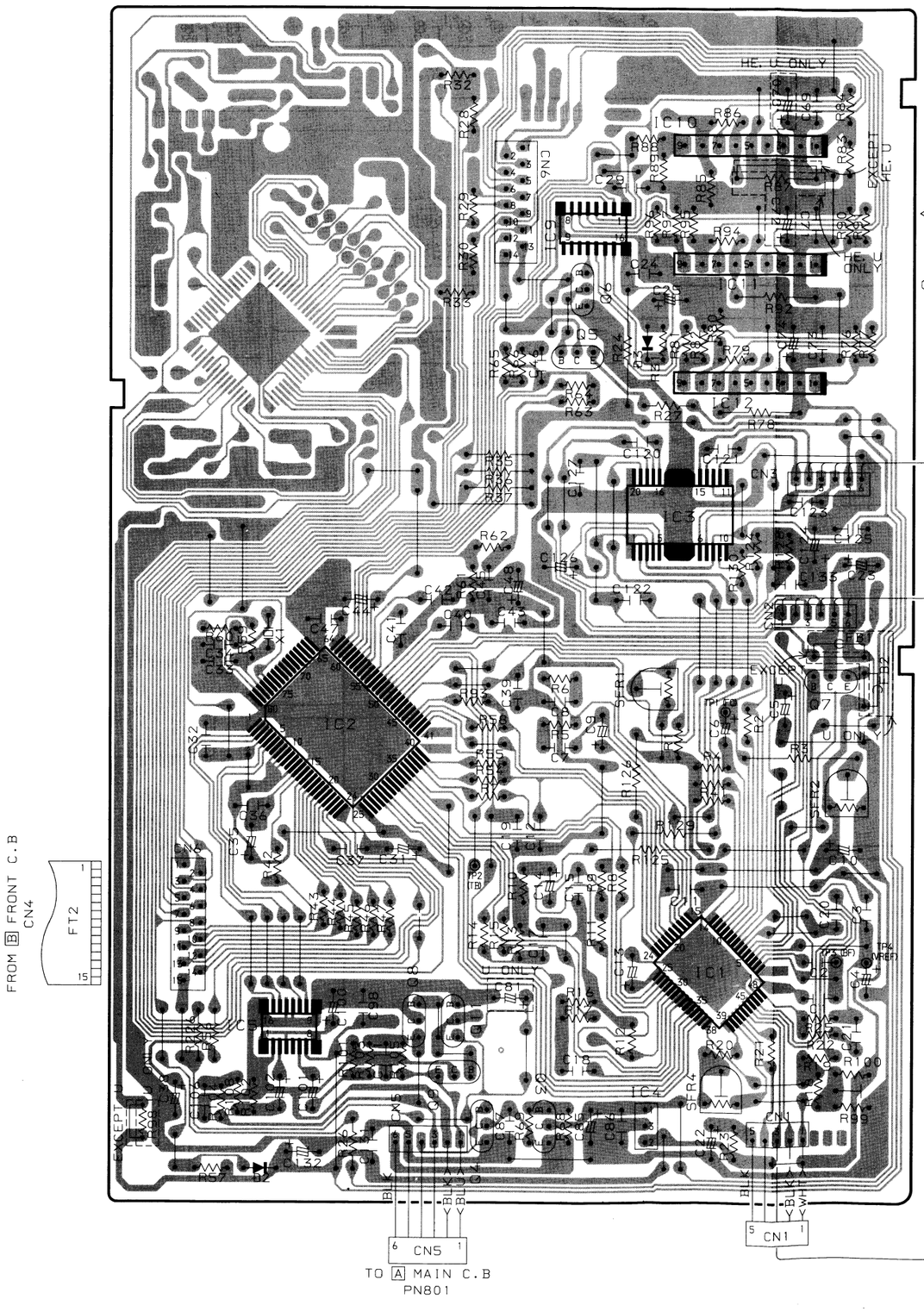
⑧ DMPC
⑨ DMFC
⑩ DMEO

FRONT C. B

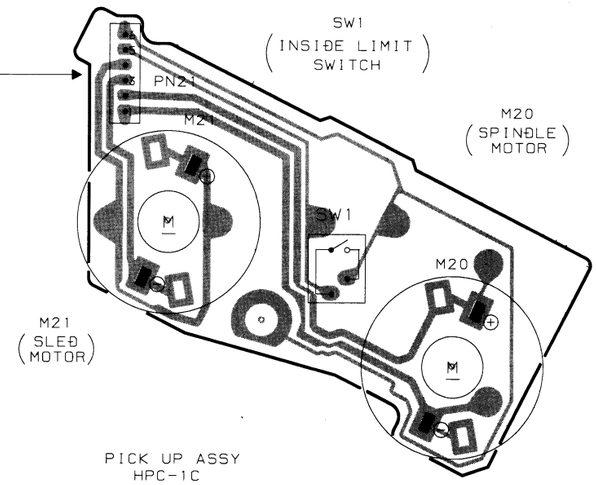
SW11 ROCK
SW12 POP
SW13 JAZZ
Đ23 ∽ 36 (ĐISC TRAY INĐICATOR)
Đ41 ∽ 54 (ĐISPLAY BACKLIGHT)
SW1, Đ21 TAPE
SW2, Đ20 TUNER BANĐ
SW14 Đ22 T-BASS
Đ6 OPE/ BATT
LCĐ1 ĐISPLAY
SW3, Đ19 AUX
SW4, Đ18 CĐ
SW8 POWER ⏻STANĐBY
SW10 MEMO
SW9 ĐUBBING SPI MOĐE TUNER/
J401 MIC
HE, HR, LH ONLY
U, EE, EZ, EEZ, K ONLY
FROM A MAIN C. B
CN802
CN803
CN804
FROM C CĐ C. B CN6
FT2
SW24 7
SW25 6
SW26 5
SW27 4
SW28 3
SW29 2
SW30 1
ĐIRECT PLAY/ĐIRECT OPEN
VR401 MIC VOL
SW22 ■ CLEAR
SW23 ❚❚ SET
EXCEPT U

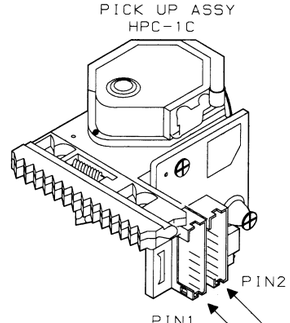

B FRONT C.B
A MAIN C.B
C CD C.B
DISPLAY
LCD1
IC1
LC867124V-5811
SYSTEM CONTROL
IC2, IC3
SHIFT RESISTER
IC4
GP1U281X
REMOTE SENSOR
Q5
DTC124XS
AC/DC SW
Q3
DTC124XS
Q6
DTC124XS
POWER CONT
Q7
9041C
Q401
9014C
Q1
DTC124XS
Q2
9015C
CN1
CN2
CN3
CN4
CN802
CN803
CN804
I-MO/ST
TUDO
CLK
DATA
MSTB
CE
MO/ST
PCONT
MUTE
SW5V
B.G
INCL
AC12V
REC
POWER
SW8V
MIC
A.G
SW 8V
SW 5V
COM 5V
KEY0
KEY1
KEY2
DISC1
DISC2
DISC3
DISC4
DISC5
DISC6
DISC7
DISC8
T-BASS
F.TAPE
F.TU
F.AUX
F.CB
DEMO
SUBB
SPEED
MINER
/DSC
POWER
CB
AUX
TUNER BAND
TAPE
BASS CHARGE
VOL DOWN
VOL UP
JAZZ
POP
ROCK
OPE/BATT CONT.
OPE/BATT
EXCEPT U
D23~63
(DISC TRAY BACK UP)
D18~22:L934AD
D23~36:204GC
D41~D51:204GC
(LCD BACKLIGHT)
EL20421D
MICLEV
SIGNAL MARK
:PB
MIC AMP
IC401 (1/2)
NJM4558LD
IC401 (2/2)
NJM4558LD
JUMPER
MIC VOL
AGC
J401
MIC
U, EE, EZ
EEZ, K
ONLY
HE, HR, LH ONLY
L1, EE, EZ
EEZ, K
ONLY
CLOCK
HE, HR ONLY
EE, EZ, EEZ, K ONLY
LH, U ONLY
AM 10K
L1 10uH R1
L2 TOROIDAL RI-818462
L3 TOROIDAL RI-818462
L4 1mH
X1 32.768KHz
X2 6.00MHz
RESET
BUS0
BUS1
BUS2
BUS3
CCE
BUCK
CDSTB
CB MUTE
FSTB
CE
MSTB
DATA
CLK
TUDO
MUTE
PCONT
REC
CDAB0
CDAB1
CDAB2
CDAB3
CDAB4
MO/ST
INCL
POWER
MICLEV

C CÐ C.B

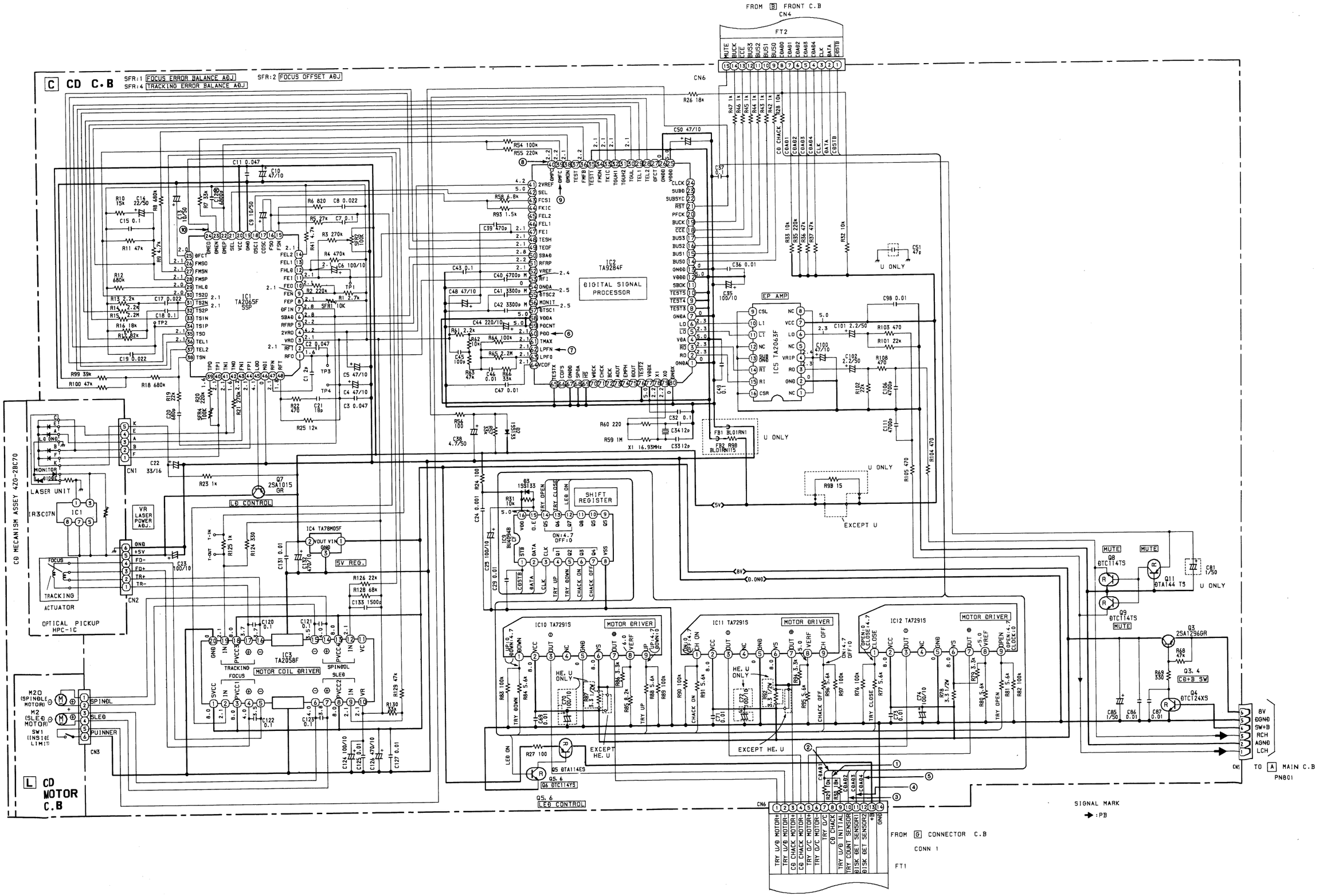


L CÐ MOTOR C.B

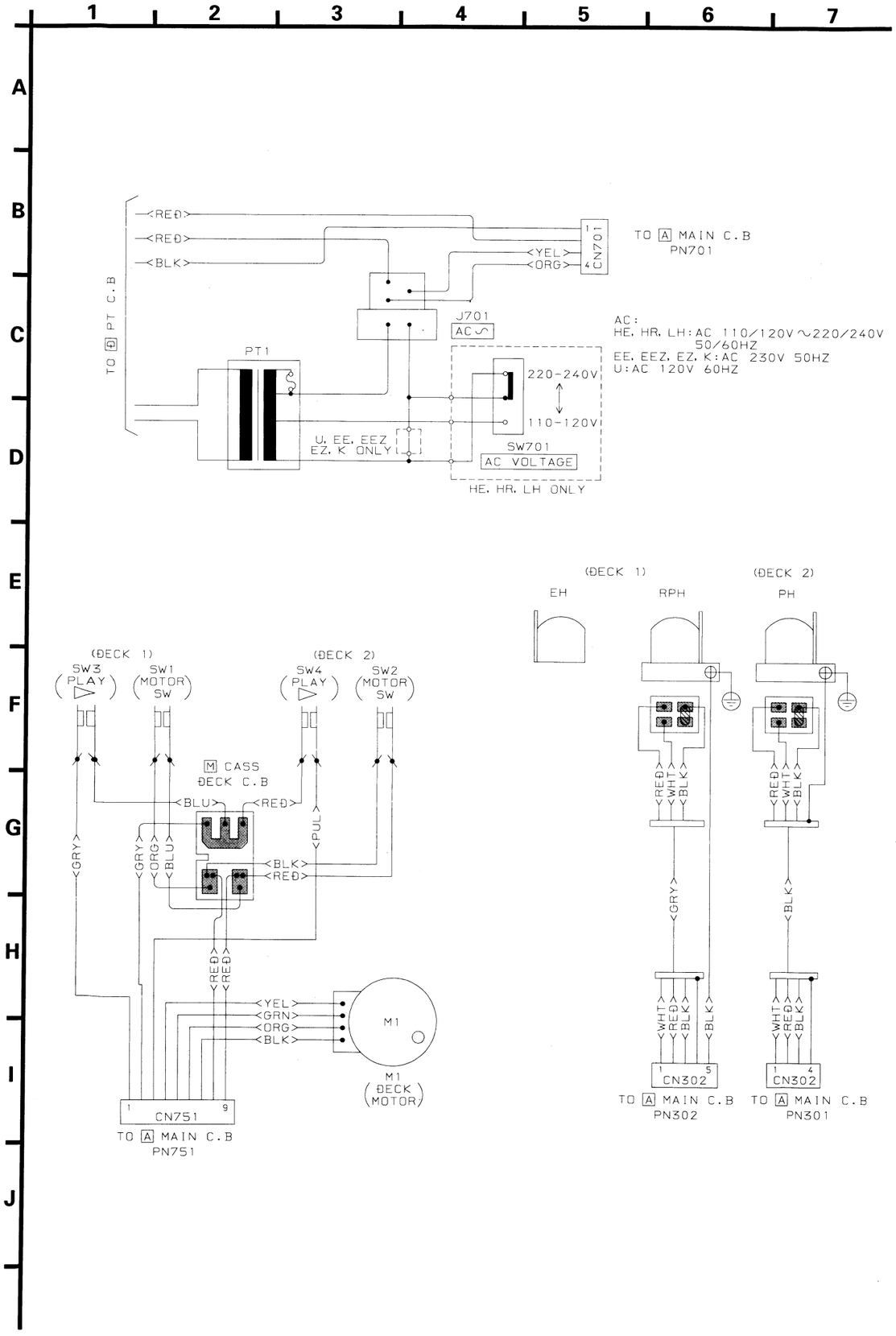




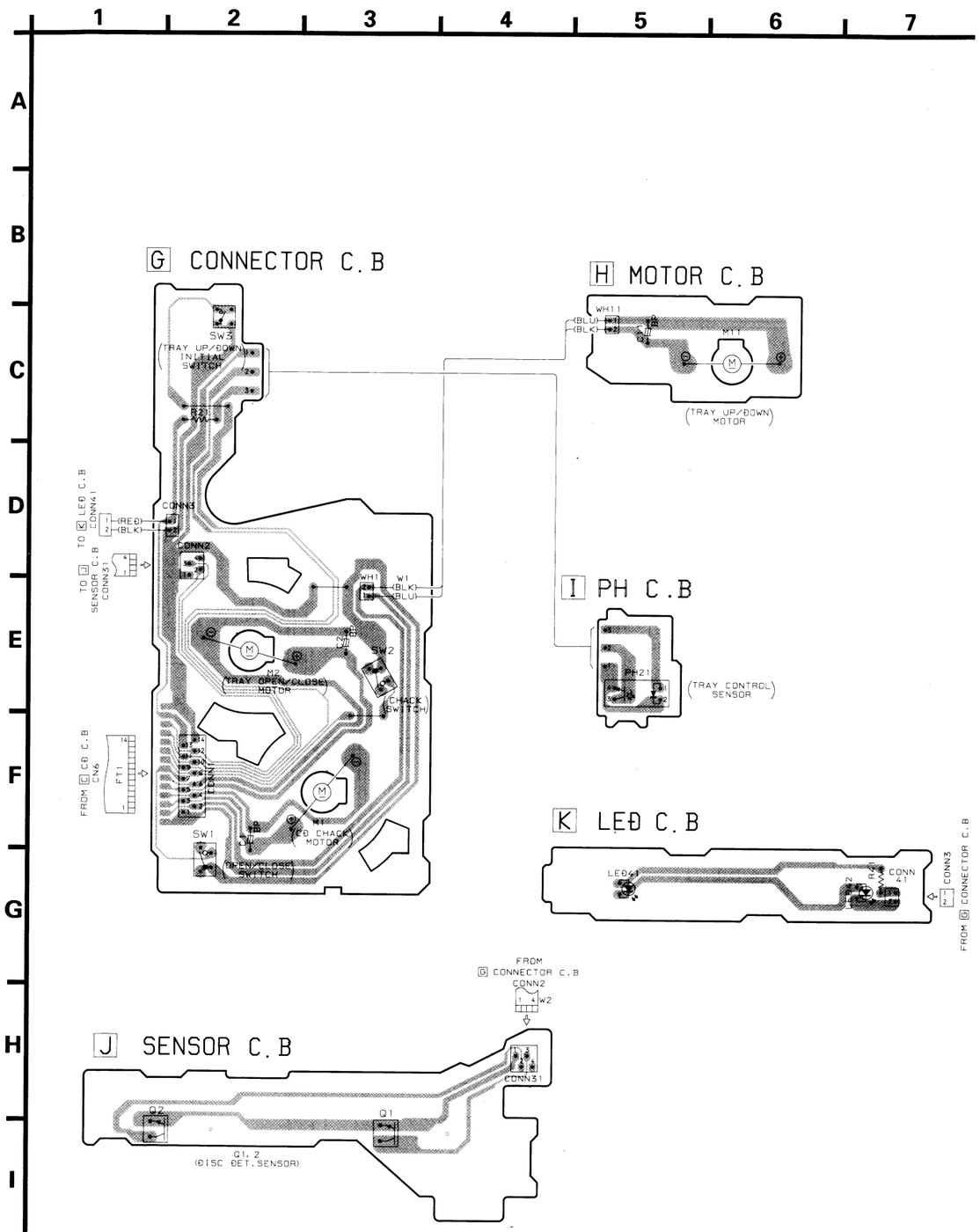
SCHEMATIC DIAGRAM – 5 (CD-1)

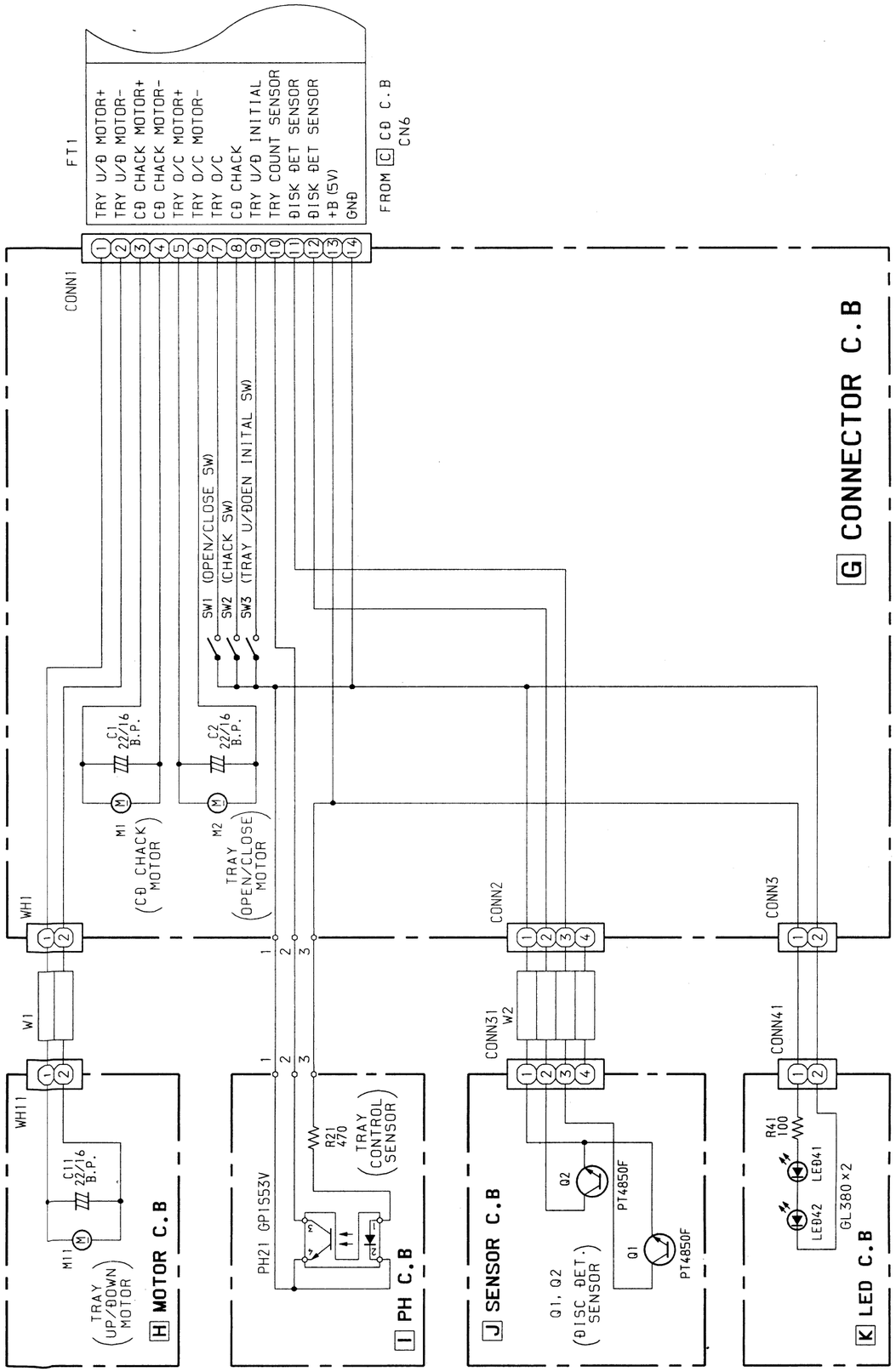


WIRING – 6 (DECK / PT)

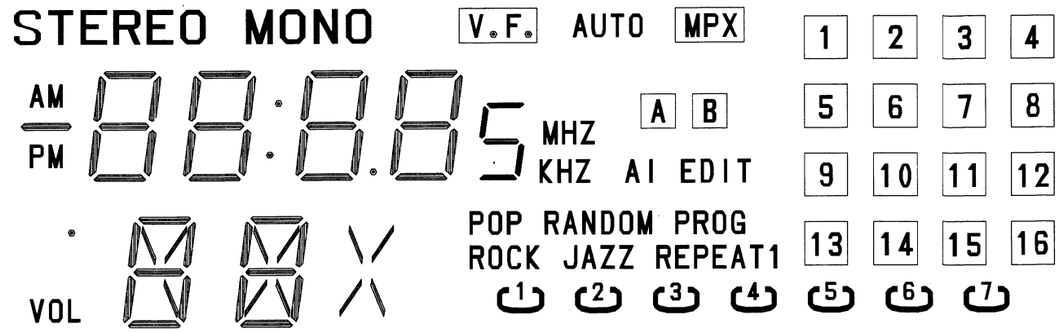


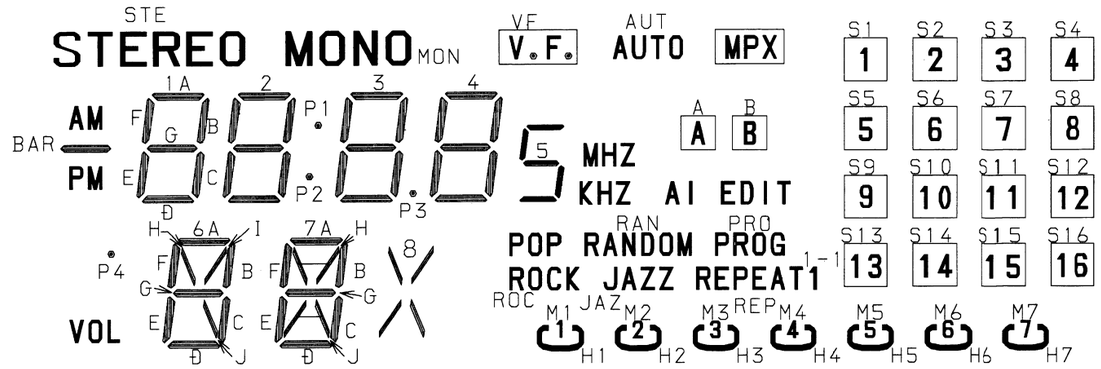
WIRING – 7 (CD-2)





GRID ASSIGNMENT

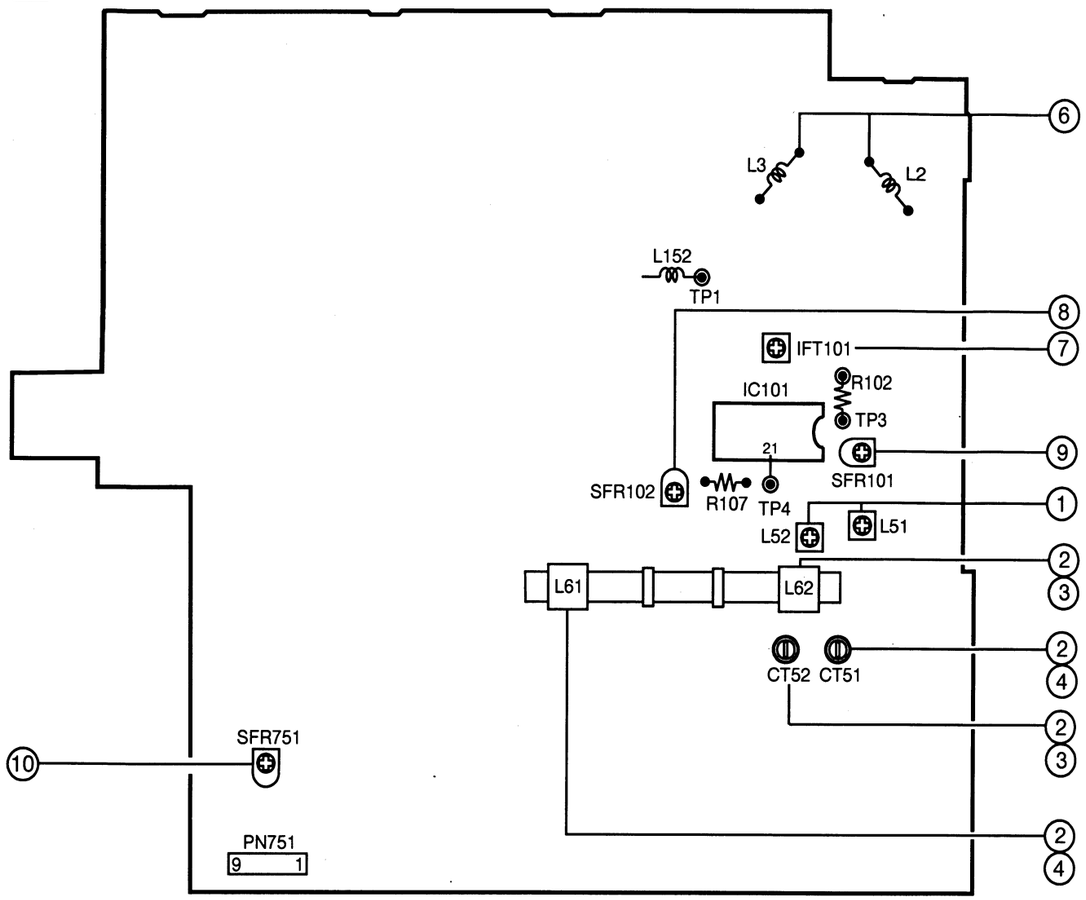




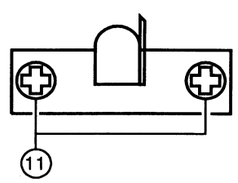
ANODE CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
COM1	COM1	—	—	—	STE	1A	P1	2A	2B	3A	3B	4A	P4	6I	6A	—
COM2	—	COM2	—	—	AM	1F	1B	2F	2G	3F	3G	4F	6F	6H	6B	7F
COM3	—	—	COM3	—	BAR	1E	1G	2E	2C	3E	3C	4E	6E	6G	6C	7E
COM4	—	—	—	COM4	PM	1Đ	1C	2Đ	P2	3Đ	P3	4Đ	VOL	6Đ	6J	—
PIN NO.	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
COM1	7H	7A	KHZ	RAN	PRO	MHZ	AUT	A	MPX	S4	S3	S2	S1	VF	MON	
COM2	7G	7B	ROC	JAZ	REP	1-1	AI	EĐIT	B	S8	S7	S6	S5	POP	4B	
COM3	7J	7C	M1	M2	M3	M4	M5	M6	M7	S12	S11	S10	S9	5	4G	
COM4	7Đ	8	H1	H2	H3	H4	H5	H6	H7	S16	S15	S14	S13	—	4C	

A MAIN C.B



RPH (DECK1) / PH (DECK2)



< TUNER SECTION >

1. MW (AM) VT Adjustment
   Settings : • Test point : TP1
   • Adjustment location :
   L51 (HE, HR, EE, K, EZ)
   L52 (LH, U)
   Method : Set to MW 531kHz and adjust L51 (HE, HR, EE, K, EZ) and L52 (LH, U) so that the test point becomes 1.3V ± 0.05V.

2. MW (AM) Tracking Adjustment
   L61 (LH, U, EE, K, EZ),
   L62 (HE, HR) 600kHz
   CT51 (LH, U, EE, K, EZ),
   CT52 (HE, HR) 1404kHz

3. LW Tracking Adjustment (EE, K, EZ only)
   L62 ..... 160kHz
   CT52 ..... 270kHz

4. SW Tracking Adjustment (HE, HR only)
   L61 ..... 4MHz
   CT51 ..... 12MHz

5. FM VT Check
   Settings : • Test point : TP1
   Method : Set to FM 87.5MHz and check so that the test point is 4.0V ± 0.1V.

6. FM Tracking Adjustment
   L2, L3 ..... 87.5MHz

7. DC Balance / Mono Distortion Adjustment
   Settings : • Test point : TP2, TP3
   • Adjustment location : IFT101
   • Input level : 54dB
   Method : Set to FM 98.0MHz and adjust IFT101 so that the voltage between TP2 and TP3 becomes 0V ± 20mV.

8. MW (AM) Auto Stop Adjustment
   Settings : • Adjustment location : SFR102
   Method : Make setup for MW (AM) 1400kHz. Adjust SFR102 so that the machine performs Auto Stop when 53dB ± 2 dB.

9. FM Auto Stop Adjustment
   Settings : • Adjustment location : SFR101
   Method : Make setup for FM 87.5MHz. Adjust SFR101 so that the machine performs Auto Stop when 32dB ± 5 dB.

< DECK SECTION >

10. Tape Speed Adjustment (DECK2)
    Settings : • Test tape : TTA–100 (TTA-111S)
    • Adjustment location : SFR751
    Method : Play back the test tape with DECK1 and adjust SFR751 so that the output frequency is 3000Hz. After the adjustment, chech that the frequency of DECK2 is 3000 ± 55Hz.

11. Head Azimuth Adjustment (DECK1, DECK2)
    Settings : • Test tape : TTA–320
    • Adjustment location : Head azimuth adjustment screw
    Method : Play back the 8kHz signal of the test tape and adjust screw so that the output becomes maximum. Next, perform on each FWD PLAY and REV PLAY mode.

PRACTICAL SERVICE FIGURE

<TUNER SECTION>

<FM SECTION>

IHF Sensitivity :	15dB ± 5dB (at 87.5MHz)
(THD 3%)	16dB ± 5dB (at 98.0MHz)
	17dB ± 5dB (at 108.0MHz)
Signal to noise ratio :	More than 60dB (at 98.0MHz)
Distortion :	Less than 2.0% (at 98.0MHz)
Auto stop level :	30dB ± 5dB (at 98.0MHz)
Stereo separation :	More than 25dB (at 98.0MHz)
Intermediate frequency :	10.7MHz

<AM(MW) SECTION>

Sensitivity :	50dB ± 5dB
(S/N 10 dB)	[at 603kHz (HE, HR, EE, K, EZ)]
	[at 600kHz (LH, U)]
	47dB ± 5dB
	[at 999 / 1000kHz (HE, HR, EE, K, EZ)]
	45dB ± 5dB[at 1000kHz (LH, U)]
	43dB ± 5dB[at 1400kHz (LH, U)]
Signal to noise ratio :	More than 30dB
	[at 999kHz (HE, HR, EE, K, EZ)]
	[at 1000kHz (LH, U)]
Distortion :	Less than 5.0%
	[at 999kHz (HE, HR, EE, K, EZ)]
	[at 1000kHz (LH, U)]
Intermediate frequency :	450kHz

<LW SECTION>(EE, K, EZ only)

Sensitivity :	60dB ± 5dB [at 153kHz]
(S/N 10dB)	54dB ± 5dB [at 198kHz]
	53dB ± 5dB [at 288kHz]
Signal to noise ratio :	More than 25dB [at 198kHz]
Distortion :	Less than 1.5% [at 198kHz]
Intermediate frequency :	450kHz

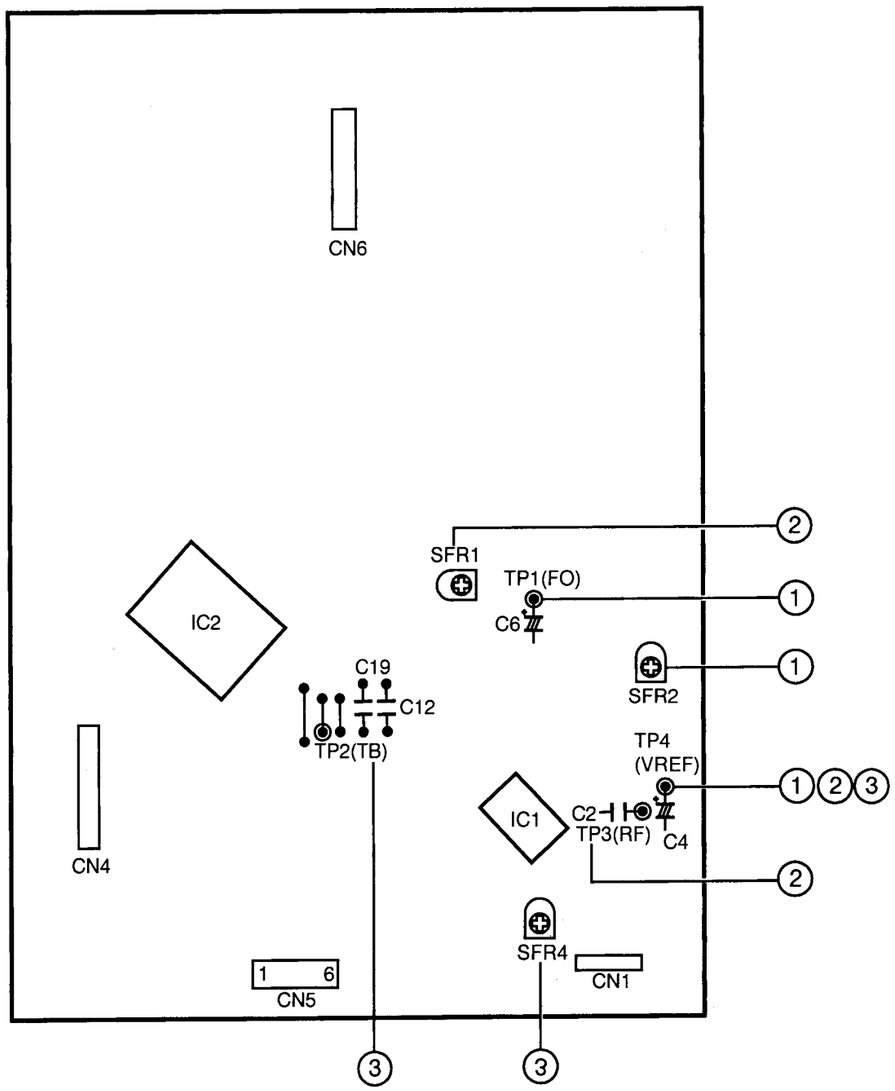
<SW SECTION>(HE, HR only)

Sensitivity :	45dB ± 5dB [at 3.9MHz]
(S/N 10dB)	40dB ± 5dB [at 8MHz]
	37dB ± 5dB [at 11.65MHz]
Signal to noise ratio :	More than 40dB [at 8MHz]

<DECK SECTION>

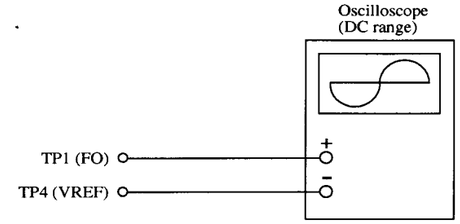
Tape speed :	3000Hz ± 90Hz
Wow & flutter :	Less than 0.4% (JIS, R.M.S)
Take-up torque :	30 ~ 60g-cm (FWD, REV)
F.F & REW torque :	55 ~ 120g-cm
Back tension :	1 ~ 4g-cm (FWD, REV)
Distortion :	Less than 5.0% (REC/PB, DC)
Noise level :	Less than 60mV (PB, AC)
	Less than 80mV (REC/PB, AC)
Signal to noise ratio :	More than 40dB (PB, AC)
	More then 37dB (REC/PB, AC)
Erasing ratio :	More than 60dB (at 400Hz)

C CD C.B

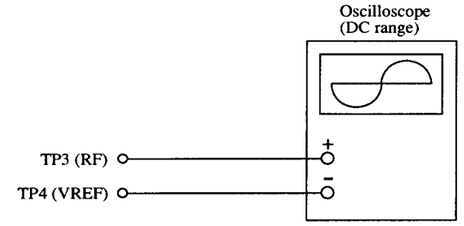


Note :
Connect a probe (10:1) of the osilloscope.

1. Focus Offset Adjustment
   1) Short the pin 4 and pin 6 of CN5 with wire.
   2) Connect an oscilloscope to the test points TP1 (FO) and TP4 (VREF).
   3) Turn on the power switch.
   4) Adjust SFR2 so that the offset voltage becomes 0mV ± 5mV.
   5) After the adjustment is completed, remove the short wire from CN5.

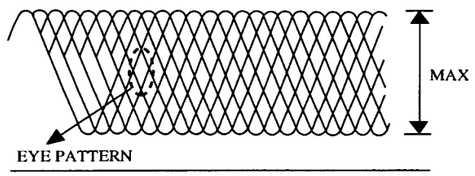


2. Focus Bias Adjustment
   Make the focus bias adjustment when replacing and repairing the optical block.



1) Connect an oscilloscope to the test points TP3 (RF) and TP4 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and play back the second composition.
4) Adjust SFR1 so that RF signal of the test point TP3 (RF) is MAX and CLEAREST.

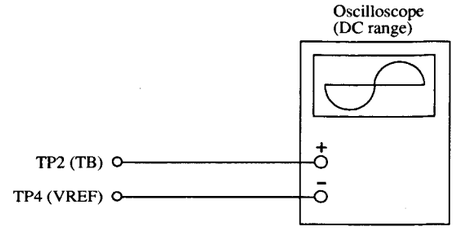
RF signal waveform



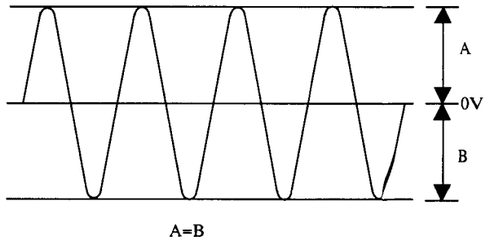
must be CLEAR and MAX

VOLT / DIV: 50mV
TIME / DIV: 0.5µs

3. Tracking Balance Adjustment



1) Connect an oscilloscope to the test points TP2 (TB) and TP4 (VREF).
2) Turn on the power switch.
3) Insert test disc TCD-782 (YEDS-18) and press the PLAY button.
4) Keep pressing the ►► key (Search).
5) Adjust SFR4 so that the waveform on the oscilloscope is vertically symmetrical as shown in the figure below.
6) After the adjustment is completed, remove the connected lead wires from the terminals.



A=B

VOLT/ DIV: 20mV
TIME/ DIV: 1mS

TEST MODE

1. How to Activate CD Test Mode
1) Insert the AC plug while pressing the function CD button.
2) Turn the POWER SW on. (All LCD display tubes will light up, and initialization will be started.

2. How to cancel CD Test Mode
Either one of the following operations will cancel the CD test mode.
- Press the function button except CD button.
- Press the power switch button.
- Disconnect the AC plug.

3. CD Test Mode Functions
When test mode is activated, the following mode functions from No. 1 to No. 5 can be used by pressing the operation keys.

Mode / No.	Operation	LCD display	Operation	Contents
Start mode No. 1	Test mode activation	All light up	• Standby status for next operation (CD block power supply ON)	Displays the machine mode that it is a test mode. All LCD displays light up
Search mode No. 2	■ key	--	• Laser diode illuminated under normal circumstances • Continual focus search * NOTE 1 (The pickup lens repeats the full-swing up-down motion.) * Avoid continual searches that last for more than 10 minutes.	FOCUS SERVO • Check focus search waveform • Check focus error waveform
Play mode No. 3	▶ key	/	• Normal playback • Focus search is continued if TOC cannot be read * NOTE 1	FOCUS SERVO / TRACKING SERVO CLV SERVO / SLED SERVO Check FOK /FZC
Traverse mode No. 4	II key	/	• During normal disc playback Press once; tracking servo OFF Press twice; tracking servo ON * NOTE 2	TRACKING SERVO ON / OFF Tracking balance (traverse) adjustment
Sled mode No. 5	⏮ key ⏭	All light up	• Pickup moves to the outermost track • Pickup moves to the innermost track * NOTE 3 (During playback, machine operates normally.)	SLED SERVO Check SLED mechanism operation

* NOTE 1: There are cases when the tracking servo cannot be locked owing to the protection circuit being operated when heat builds up in the driver IC if the focus search is operated continually for more than 10 minutes. In these cases, the power supply should be switched off for 10 minutes until heat has been reduced and then re-started.

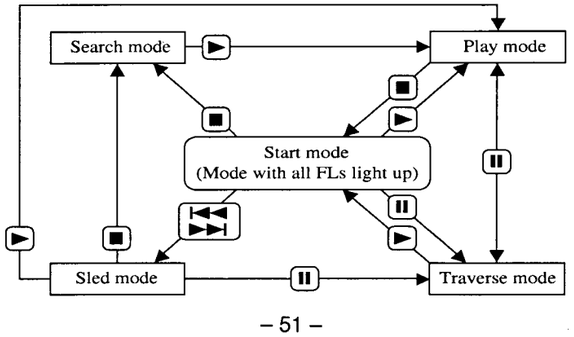
* NOTE 2: Do not press the ⏮ or ⏭ keys when the machine is in the II status is active. If they are pressed, playback will not be possible after the II status has been canceled. If the ⏮ or ⏭ keys are pressed in the II status, press the ■ key and return to start mode (No. 1).

* NOTE 3: When pressing the ⏮ or ⏭ keys, take care to avoid damage to the gears. Because the sled motor is activated when the ⏮ or ⏭ keys are pressed, even when the pick-up is at the outermost or innermost track.

* NOTE 4: Press the eject key if the CD changer mechanism is jammed while initializing.

* NOTE 5: Disc cannot be changed during the test mode. (Use the first disc tray)

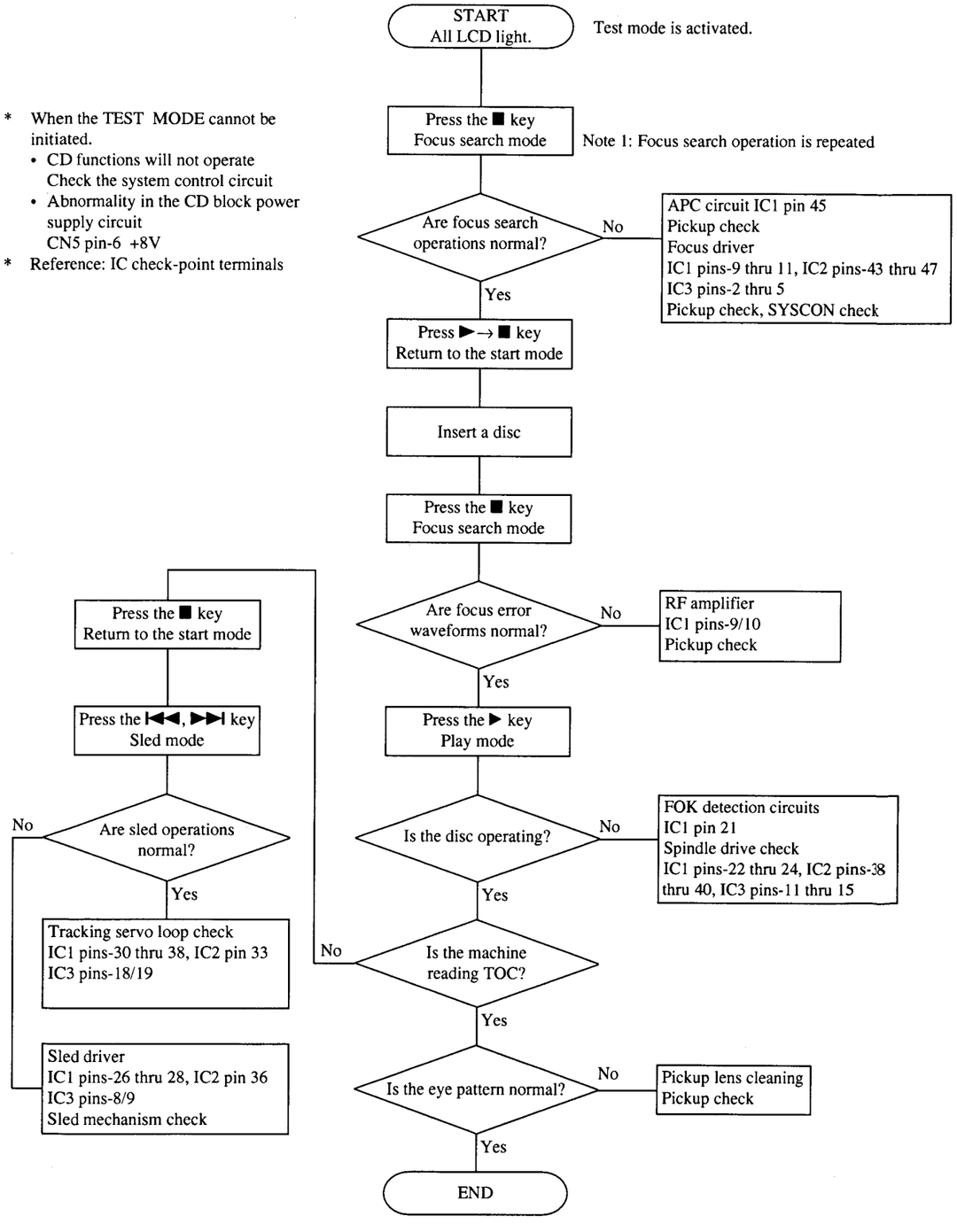
4. Operation Outline
The operation of each mode is carried out in the direction of the arrows from the start mode as indicated in the following illustration.
* Play mode is operated when pressing the disc direct play key.



CD TROUBLE-SHOOTING

Flow Chart

* When the TEST MODE cannot be initiated.
  - CD functions will not operate
    Check the system control circuit
  - Abnormality in the CD block power supply circuit
    CN5 pin-6 +8V
* Reference: IC check-point terminals



IC DESCRIPTION

IC, LC867124V-5811

Pin No.	Pin Name	I/O	Description
1	O-DATA	O	Connect to DI and DATA for LC7218 and BU4094.
2	O-CLK	O	Connect to CL and CLK for LC7218 and BU4094.
3	I-TUDO	I	Connect to DO for LC7218.
4	O-MUTE	O	Main mute output.
5	O-PCCONT	O	Main power control output.
6	P70	–	Not connected.
7	I-$\overline{\text{RST}}$	I	Reset. "L" when reset.
8	XT1	I	Input terminal for crystal oscillator (32.768 kHz).
9	XT2	O	Output terminal for crystal oscillator (32.768 kHz).
10	VSS1	–	Ground.
11	CF1	I	Input terminal for 6 MHz oscillation.
12	CF2	O	Output terminal for 6 MHz oscillation.
13	VDD1	–	Power supply.
14 ~16	I-KEY0~I-KEY2	I	Key AD input.
17~21	I-CDAD0~I-CDAD4	I	Detect CD changer state (AD input).
22	P90	–	Not connected.
23	I-MO / $\overline{\text{ST}}$	I	Detect tuner / stereo state.
24	I-REC	I	Recording state detection.
25	I-MICLEV	I	Detect MIC level.
26	I-$\overline{\text{POWER}}$	I	Detect main power supply (+12V).
27	I-INCL	I	Detect the slope of set. "HI" when slop.
28	I-RMT	I	Remote controller input.
29	O-$\overline{\text{INIT}}$	O	Initial set terminal.
30	NC	–	Not connected.
31~40	S1~S11	O	LCD segment output. S1~S6, S9~S11 are common used for initial detection.
41	VDD3	–	Power supply.
42	VSS3	–	Ground.
43~46	S12,S13,S16~S31	O	LCD segment output.
61~63	V1~V3	–	Not connected.
64~67	COM0~COM3	O	LCD common output.
68	VSS2	–	Ground.
69	VDD2	–	Power supply.
70~73	I/O-BUS0~I/O-BUS3	I/O	CD IC control data bus input / output.
74	O-$\overline{\text{CCE}}$	O	CD IC contro chip enable output.
75	O-BUCK	O	CD IC control data bus clock output.
76	O-$\overline{\text{CDSTB}}$	O	Connect to STB terminal of CD IC BU4094.
77	O-CD MUTE	O	Mute output for CD.
78	O-$\overline{\text{FSTB}}$	O	Connect to STB terminal of FRONT IC BU4094.
79	O-CE	O	Connect to CE terminal of IC LA7218 / MO / $\overline{\text{ST}}$ when analog tune.
80	O-$\overline{\text{MSTB}}$	O	Connect to STB terminal of MAIN IC BU4094.

IC, TC9284F

Pin No.	Pin Name	I/O	Description
1	GNDA	–	Analog ground terminal for DA converter (R channel).
2	RO	O	R channel data forward output terminal.
3	$\overline{\text{RO}}$	O	R channel data reverse output terminal.
4	VDA	–	Analog power supply terminal for DA converter.
5	$\overline{\text{LO}}$	O	L channel data reverse output terminal.
6	LO	O	L channel data forward output terminal.
7	GNDA	–	Analog ground terminal for DA converter (L channel).
8	$\overline{\text{TEST3}}$	I	Test terminal. Normally, keep at "H" level or open.
9	$\overline{\text{TEST4}}$	I	Test terminal. Normally, keep at "H" level or open.
10	$\overline{\text{TEST5}}$	I	Test terminal. Normally, keep at "H" level or open.
11	SBOK	O	Subcode Q data CRC check adjusting result output terminal. The adjusting result is OK at "H" level (Not connected).
12	VDDD	–	Digital supply voltage terminal (+5V).
13	GNDD	–	Digital ground terminal.
14~17	BUS0~BUS3	I/0	Command and data sending / receiving input / output terminals.
18	$\overline{\text{CCE}}$	I	Command and data sending / receiving chip enable signal input terminal. The bus line becomes active at "L" level.
19	BUCK	I	Command and data sending / receiving clock input terminal.
20	PFCK	O	Regeneration system frame periodic signal output terminal (7.35kHz).
21	$\overline{\text{RST}}$	I	Reset input terminal. The initial reset is reset at "L" level.
22	SUBSYC	O	Subcode sync signal output terminals.
23	SUBD	O	Subcode P ~ W output terminal.
24	CLCK	I	Subcode P ~ W data readout clock input terminal.
25	VDDD	–	Digital supply voltage terminal.
26	GNDD	–	Digital ground terminal.
27	DFCT	O	Defect detection signal output terminal. VREF when defect is detected. Normally, HiZ (Not connected).
28~29	TEL2~TEL1	O	Tracking gain adjusting analog switch output terminals. VREF OR HiZ.
30	TGUL	O	Tracking servo loop low frequency phase compensator change-over analog switch output terminal. HiZ (gain up) when detecting shock. Normally, VREF.
31~32	TGUH2~TGUH1	O	Tracking servo loop middle / high frequency phase compensator changeover analog switch output terminals. HiZ (gain up) when detecting shock. Normally,VREF. TGUH1 is used at normal regeneration and TGUH2 is used at double speed regeneration (TGUH2 is not connected).
33	TKIC	O	Tracking actuator kick signal output terminal. Kick in the outer circumferential direction at "H" level and in the inner circumferential direction at "L" level.
34	FMON	O	Feed servo ON / OFF analog switch output terminals. Servo on at "HiZ" off at "VREF"
35	$\overline{\text{TEST1}}$	I	Test terminal. Normally, keep at "H" level or open (Not connected).

<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Description</th></tr>
<tr><td>36</td><td>FMFB</td><td>O</td><td>Feed motor FWD / REW feeding control signal output terminal. Feed in the outer circumferential direction at "H" level and in the inner circumferential direction at "L" level.</td></tr>
<tr><td>37</td><td>$\overline{\text{TEST}}$</td><td>I</td><td>Test terminal. Normally, keep at "H" level or open (Not connected).</td></tr>
<tr><td>38</td><td>DMON</td><td>O</td><td>Disc motor driving circuit gain change-over analog switch output terminal.</td></tr>
<tr><td>39</td><td>DMFC</td><td>O</td><td>Disc motor CLV servo AFC signal output terminal.
<table>
<tr><th>COMMAND</th><th>DMFC OUTPUT</th><th>OPERATION</th></tr>
<tr><td>DMFK</td><td>H</td><td>Motor acceleration</td></tr>
<tr><td>DMSV</td><td>PWM</td><td>CLV servo ON</td></tr>
<tr><td>DMBK</td><td>L</td><td>Motor deceleration</td></tr>
<tr><td>DMOFF</td><td>VREF</td><td>CLV servo OFF</td></tr>
</table></td></tr>
<tr><td>40</td><td>DMPC</td><td>O</td><td>Disc motor CLV servo APC signal output terminal.</td></tr>
<tr><td>41</td><td>2VREF</td><td>I</td><td>Double times reference voltage input terminal (VREF x 2).</td></tr>
<tr><td>42</td><td>SEL</td><td>O</td><td>Servo mode indicating signal output terminal.
<table>
<tr><th>SEL</th><th>LD ON / OFF</th><th>FOCUS SERVO</th><th>OPERATION</th></tr>
<tr><td>L</td><td>OFF</td><td>OFF</td><td>LD OFF</td></tr>
<tr><td>HiZ</td><td>ON</td><td>OFF</td><td>Focus Search</td></tr>
<tr><td>H</td><td>ON</td><td>ON</td><td>Normal play, etc
Focus Servo ON : F OK)</td></tr>
</table></td></tr>
<tr><td>43</td><td>FCSI</td><td>O</td><td>Focus actuator driving signal output terminal in the focus search mode.
<table>
<tr><th>COMMAND</th><th>FCSI OUTPUT</th><th>OPERATION</th></tr>
<tr><td>FORST</td><td>H</td><td>Lens gets for away from disc</td></tr>
<tr><td>FORSET</td><td>L</td><td>Lens gets near disc</td></tr>
<tr><td>Others</td><td>HiZ</td><td>Other than focus search</td></tr>
</table></td></tr>
<tr><td>44</td><td>FKIC</td><td>O</td><td>Focus actuator driving signal output terminal in the focus gain adjusting mode.
<table>
<tr><th>COMMAND</th><th>FCSI OUTPUT</th><th>OPERATION</th></tr>
<tr><td>FGASR</td><td>H</td><td>Lens gets for away from disc</td></tr>
<tr><td>FGASS</td><td>L</td><td>Lens gets near disc</td></tr>
<tr><td>Others</td><td>HiZ</td><td>Other than focus adjustment</td></tr>
</table></td></tr>
<tr><td>45~46</td><td>FEL2~FEL1</td><td>O</td><td>Focus gain adjusting analog switch output terminals (Not connected).</td></tr>
<tr><td>47</td><td>FEI</td><td>I</td><td>Focus error signal input terminal.</td></tr>
<tr><td>48</td><td>TESH</td><td>I</td><td>Tracking error signal input sample holding analog switch input terminal.</td></tr>
<tr><td>49</td><td>TEOF</td><td>O</td><td>Tracking servo operation ON / OFF analog switch output terminal.
VREF when the tracking is OFF.</td></tr>
<tr><td>50</td><td>SBAD</td><td>I</td><td>Sub beam adding signal input terminal.</td></tr>
<tr><td>51</td><td>RFRP</td><td>I</td><td>RF ripple signal input terminal.</td></tr>
<tr><td>52</td><td>VREF</td><td>I</td><td>Reference voltage input terminal (+2.1 V).</td></tr>
<tr><td>53</td><td>RFI</td><td>I</td><td>RF signal input terminal.</td></tr>
</table>

Pin No.	Pin Name	I/O	Description
54	GNDA	–	Analog ground terminal.
55	DTSC2	O	Data slice control EFM signal passive output terminal.
56	MONIT	O	Internal signal (EFMO, PLCK, LOCK and muting) output terminal. Selected by comannd (Not connected).
57	DTSC1	O	Data slice control EFM signal negative output terminal.
58	VDDA	–	Analog supply voltage terminal (+5 V).
59	PDCNT	I	PDO output control terminal. At "L" level, PDO output is made to HiZ by force.
60	PDO	O	Phase error signal output terminal between EFM signal and PLCK.
61	TMAX	O	TMAX signal output terminal. HiZ at time of system clock. TMAX PERIOD / TMAX OUTPUT Longer than specified period / L Shorter than specified period / H (2VREF) Specified period / HiZ
62	LPFN	I	LPF amplifier inverting input terminal for PLL.
63	LPFO	O	LPF amplifier output terminal for PLL.
64	VCOF	I	VCO filter terminal.
65	TESTX	I	Test terminal.
66	NC	O	Double speed monitor output terminal. Double speed operation at "L" level (Not connected).
67	GNDD	–	Digital ground terminal.
68	SPDA	O	Processor status signal output terminal. Correction process judging result, memory buffer capacity, etc.
69	$\overline{\text{HS}}$	O	Correction system frame period signal output terminal (7.35 kHz).
70	WDCK	O	Word clock output terminal. Normally, 88.2 kHz.
71	CHCK	O	Channel clock output terminal. Normally, 44.1 kHz.
72	BCK	O	Bit clock output terminal. Normally, 1.4112 MHz.
73	AOUT	O	Audio data output terminal.
74	EMPH	O	Emphasis ON / OFF indication signal output terminal. Emphasis ON at "H" leve.
75	DOUT	O	Digital out output terminal.
76	$\overline{\text{TEST2}}$	I	Test terminal. Normally, keep at "H" level or open.
77	VDDX	O	Oscillator supply voltage terminal.
78	XI	I	Crystal oscillator connecting terminal.
79	XO	O	Crystal oscillator connecting terminal.
80	GNDX	O	Oscillator ground terminal.

IC, TA2065F

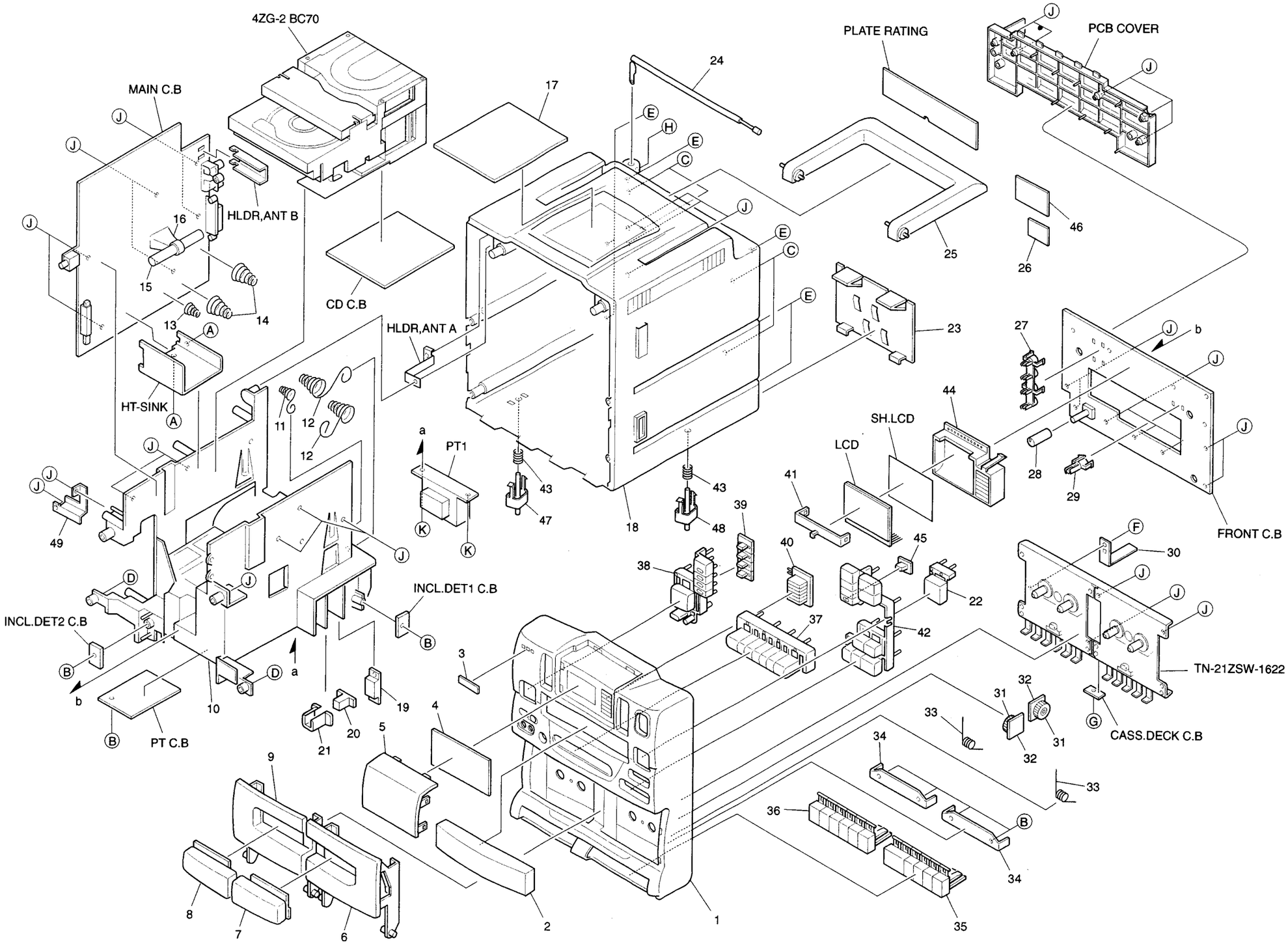
Pin No.	Pin Name	I/O	Description
1	RFO	O	RF amplifer (RF AMP) output terminal.
2	RFI	I	RF ripple signal generating circuit input terminal.
3	VRO	O	VR amplifier output terminal.
4	2VRO	O	2VR amplifier output terminal.
5	RFRP	O	RF ripple signal output terminal.
6	SBAD	O	Defects detection signal output terminal.
7	DFIN	I	Defects detecting comparator positive phase input terminal. (Connected to SBAD)
8	FEP	I	Focus error balance adjusting input terminal.
9	FEN	I	Focus error amplifier (FE AMP) negative phase input terminal.
10	FEO	O	Focus error amplifier (FE AMP) output terminal.
11	FEI	I	Focus output amplifier (FS AMP) positive phase input terminal.
12	FHLD	I	Hold switch terminal for defect.
13	FEL1	I	Focus gain adjusting terminal. (Not used)
14	FEL2		
15	FSN	I	Focus output amplifier (FS AMP) negative phase input terminal.
16	FSO	O	Focus output amplifier (FS AMP) output terminal.
17	COSC	O	Focus search signal generating capacitor connecting terminal.
18	OSCI	I	Focus search signal generating built-in current source control input terminal.
19	GND	–	Ground terminal.
20	VCC	–	Power source terminal (+5V).
21	SEL	I	Analog switch control signal input terminal.
22	DMEP	I	Disc motor amplifier (DM AMP) positive phase input terminal.
23	DMEN	I	Disc motor amplifier (DM AMP) negative phase input terminal.
24	DMEO	O	Disc motor amplifier (DM AMP) output terminal.
25	DFCT	I	Defect detecting comparator negative phase input terminal.
26	FMSO	O	Feed motor output amplifier (FMS AMP) outout terminal.
27	FMSN	I	Feed motor output amplifier (FMS AMP) negative phase input terminal.
28	FMSP	I	Feed motor output amplifier (FMS AMP) positive phase input terminal.
29	THLD	I	Hold switch terminal for defect.
30	TS2O	O	Tracking servo amplifier 2 (TS2 AMP) output terminal.
31	TS2N	I	Tracking servo amplifier 2 (TS2 AMP) negative phase input terminal.
32	TS2P	I	Tracking servo amplifier 2 (TS2 AMP) positive phase input terminal.
33	TS1N	I	Tracking servo amplifier 1 (TS1 AMP) negative phase input terminal. (Not used)
34	TS1P	I	Tracking servo amplifier 1 (TS1 AMP) positive phase input terminal.
35	TSO	O	Tracking output amplifier (TS AMP) output terminal.
36	TEL1	I	Tracking gain adjusting terminal.
37	TEL2		
38	TSN	I	Tracking output amplifier (TS AMP) negative phase input terminal.
39	TPO	O	Sub-beam I-V amplifier output terminal.
40	TPI	I	Sub-beam I-V amplifier input terminal.
41	TNI		
42	TNO	O	Sub-beam I-V amplifier output terminal.
43	FNI	I	Main-beam I-V amplifier input terminal.
44	FPI		
45	LDO	O	Laser diode amplifier output terminal.
46	MDI	I	Monitor photo diode amplifier input terminal.
47	RFN	I	RF amplifier negative phase input terminal.
48	RFT	I	RF amplifier peaking terminal.

IC, BU2092

Pin No.	Pin Name	I/O	Description
1	VSS	–	Ground.
2	DATA	I	Serial data input.
3	CLOCK	I	Shift clock input for data.
4	LCK	I	Latch clock input for data.
5~16	Q0~Q11	O	Parallel data output.
17	$\overline{OE}$	O	Output enable.
18	VDD	–	Power supply.

IC, TA2063F

Pin No.	Pin Name	I/O	Description
1	NC	I	Not connected.
2	GND	–	Ground.
3	RO	O	R channel analog output terminal.
4	VRIP	–	VREF voltage terminal (VCC/2).
5	NC	–	Not connected.
6	LO	O	L channel analog output terminal.
7	VCC	–	Power voltage terminal.
8	NC	I	Not connected.
9	CSL	–	L channel ground terminal for non-turn over input filter.
10	LI	I	L channel non-turn over input terminal.
11	$\overline{LI}$	I	L channel turn over input terminal.
12	NC	–	Not connected.
13	SUBGND	–	Sub ground terminal.
14	$\overline{RI}$	I	R channel turn over input terminal.
15	RI	I	R channel non-turn over input terminal.
16	CSR	–	R channel ground terminal for non-turn over input filter.

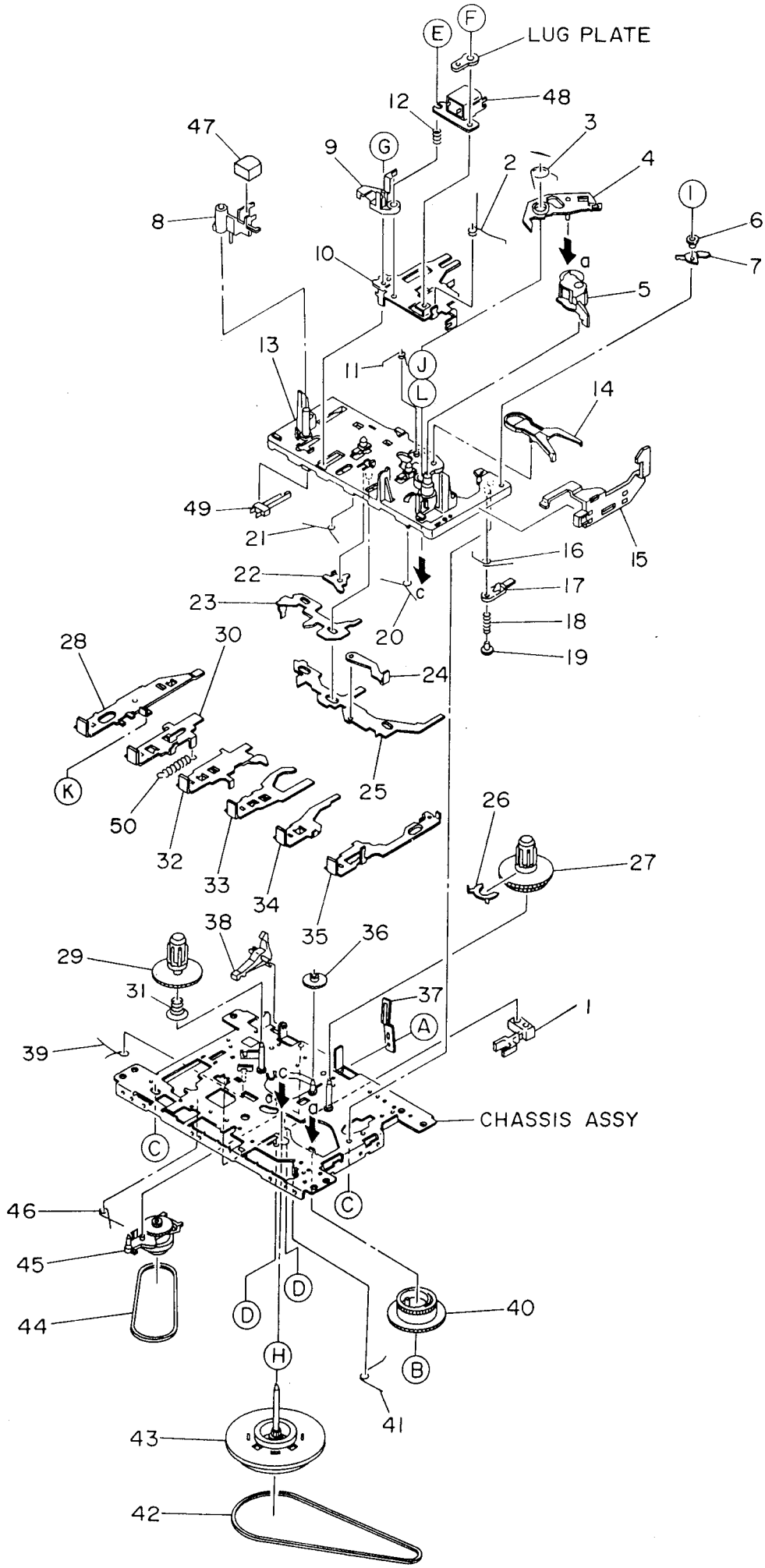

4ZG-2 BC70
MAIN C.B
HLDR,ANT B
CD C.B
HLDR,ANT A
HT-SINK
PT C.B
INCL.DET1 C.B
INCL.DET2 C.B
PT1
PLATE RATING
PCB COVER
SH.LCD
LCD
FRONT C.B
CASS.DECK C.B
TN-21ZSW-1622

MECHANICAL PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-030-500-101		CAB,FRONT<700U,LH>
1	S1-030-500-301		CAB,FRONT<710U>
1	S1-030-500-201		CAB,FRONT<EXCEPT U,LH>
2	S1-030-600-101		PANEL,TRAY
3	S1-023-360-101		BADGE AIWA
4	S1-030-880-201		PLATE,DISPLAY<EXCEPT 710U>
4	S1-030-880-101		PLATE,DISPLAY<710U>
5	S1-030-560-101		DISPLAY,WINDOW
6	S1-030-530-101		DOOR,CASS(R)
7	S1-030-590-101		WINDOW,CASS(R)
8	S1-030-580-101		WINDOW,CASS(L)
9	S1-030-520-101		DOOR,CASS(L)
10	S1-030-770-101		CHAS,CENTER
11	S2-009-920-101		BAT,SPR-C C
12	S2-009-900-101		BAT,SPR A
13	S2-009-930-101		BAT,SPR-C D
14	S2-009-910-101		BAT,SPR B
15	S1-800-051-000		BAR,FERRITE 10-100<EXCEPT HE,HR>
15	S1-800-061-000		BAR,FERRITE SW<HE,HR>
16	S1-030-980-101		HLDR,BAR ANT AM
17	S1-030-570-101		WINDOW,CD
18	S1-030-510-101		CAB,REAR
19	S8-021-110-000		SELECTR,VOLTAGE 3331-K1<LH,HE,HR>
20	S2-3C0-041-000		AC,SOCKET<U>
20	S2-3C0-071-000		AC,SOCKET VDE APP<EXCEPT U>
21	S1-023-450-101		COVER,AC SOCKET
22	S1-030-660-201		BTN,OPEN
23	S1-030-550-101		LID,BAT
24	SA-N00-361-000		ANT,6.0-187
25	S1-030-540-101		HANDLE(CADW700B)
26	S1-030-930-101		VOLTAGE,PLATE<EXCEPT LH,HE,HR>
27	S1-030-730-101		FUNC,LED HOLDER(CADW700)
28	S1-030-670-101		KNOB,MIC
29	S1-030-740-101		LED,HOLDER T-BASS
30	S2-009-870-201		REC,SPR-P
31	S1-030-850-101		GEAR,DAMPER(CADW700)
32	S1-030-860-101		BRKET,DAMPER
33	S2-009-940-101		CASS,SPR-T
34	S2-009-880-101		SECC,KEY CASS HOLDER
35	S1-030-620-101		KEY,CASS(R)
36	S1-030-610-101		KEY,CASS(L)
37	S1-030-650-101		BTN,DIRECT
38	S1-030-640-101		BTN,FUNC
39	S1-030-680-101		LENS,FUNC
40	S1-030-700-101		LED,LENS
41	S1-030-720-101		LED,COVER
42	S1-030-630-101		BTN,CD
43	S2-009-950-101		FOOT,SPR-C
44	S1-030-710-101		LCD,HOLDER
45	S1-030-690-101		LENS,T-BASS
46	S1-030-940-101		PLATE,CD-G
47	S1-030-970-101		BTN,FOOT(A)
48	S1-030-760-101		BTN,FOOT
49	S2-009-990-101		CHAS,HOLDER
A	SB-T00-060-500		BH/TS 3-L8MM
B	87-751-096-410		VT2+3-10
C	87-721-097-010		KH/TS 3-L12MM
D	87-741-100-010		PH/TA 3-L16MM
E	87-741-104-010		PH/TA 3-L30MM
F	87-251-033-010		PH/MS 2-L4MM
G	87-252-035-010		PH/MS M2-6MM<EXCEPT 710U>
H	87-253-098-010		PH/MS 3-L14MM
I	87-741-097-010		PH/TS 3-L12MM
J	87-761-096-010		WPA/TA 3-L10MM

TAPE MECHANISM EXPLODED VIEW 1 / 2

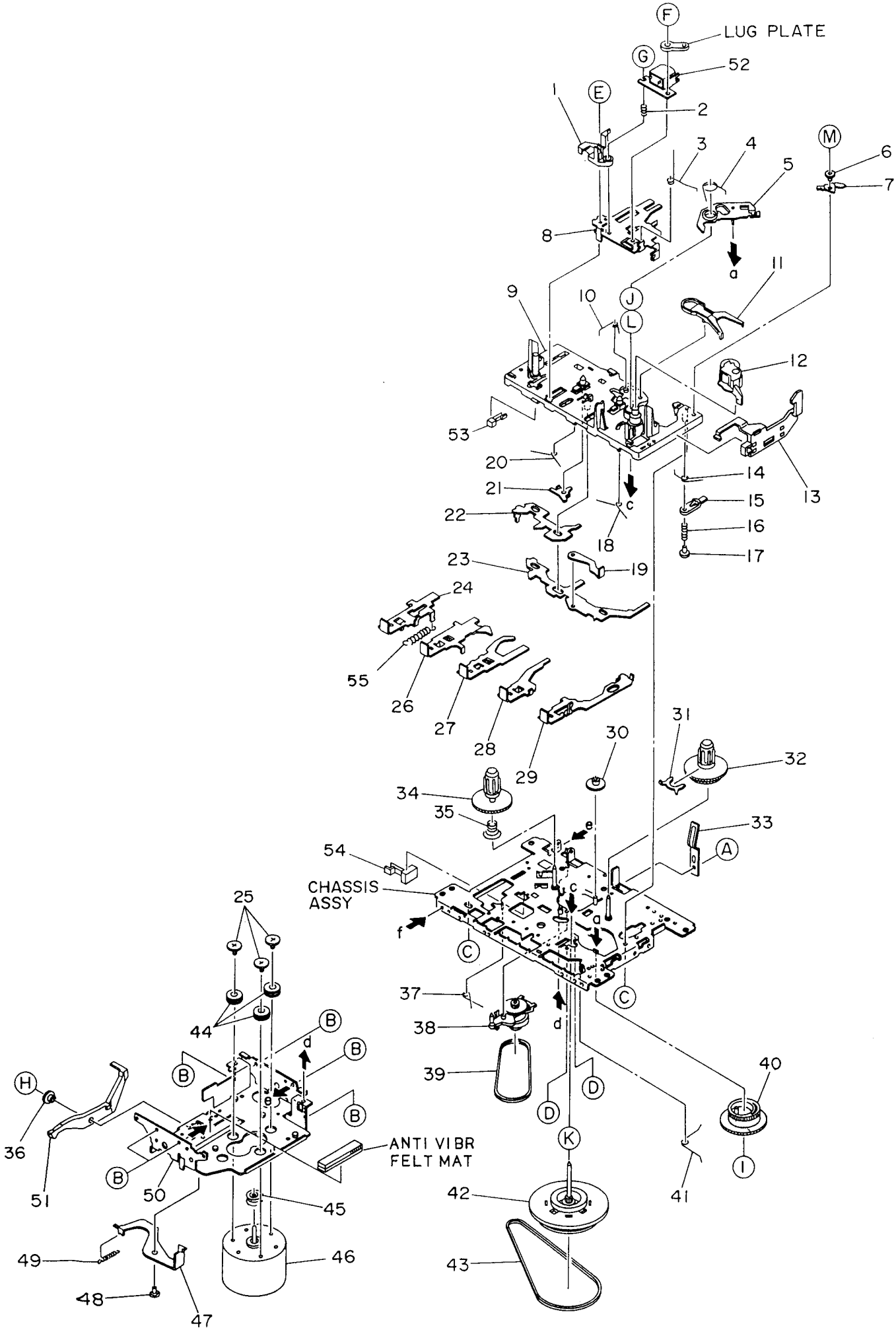


TAPE MECHANISM PARTS LIST 1 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S6-401-011-610		LEAF SW MSW-17820MVEI
2	S1-921-030-030		PANEL P SPRING
3	S1-921-260-050		GEAR PLATE SPRING
4	S1-921-265-020		GEAR PLATE ASSY
5	S1-921-043-090		PINCH ROLLER ARM ASY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-050		MG ARM
9	S1-921-030-4A0		HEAD BASE
10	S1-921-030-110		HEAD PANEL
11	S1-921-141-8A0		M CONTROL SPRING
12	S1-821-030-070		AZIMUTH SPRING
13	S1-921-143-010		BASE ASSY
14	S1-921-260-4A0		SENSING LEVER
15	S1-921-130-020		EJECT SLIDE LEVER
16	S1-921-141-3A0		P CONTROL SPRING
17	S1-921-140-820		PAUSE LEVER(F)
18	S1-921-140-120		PAUSE LEVER SPRING
19	S1-921-140-110		PAUSE STOPPER
20	S1-921-140-150		BUTTON LEVER SPRING(B)
21	S1-921-140-140		BUTTON LEVER SPRING(A)
22	S1-921-140-200		PR STOPPER
23	S1-921-140-090		SWITCH ACTUATOR
24	S1-821-011-590		E KICK LEVER
25	S1-921-140-080		PUSH BUTTON ACTUATOR
26	S1-921-050-060		SENSER
27	S1-921-053-030		TAKE UP REEL ASSY
28	S1-921-140-220		REC BUTTON LEVER
29	S1-921-053-040		SUPPLY REEL ASSY
30	S1-921-140-230		PLAY BUTTON LEVER
31	S1-829-100-100		BACK TENSION SPRING
32	S1-921-140-240		REW BUTTON LEVER
33	S1-921-140-250		FF BUTTON LEVER
34	S1-921-140-260		STOP BUTTON LEVER
35	S1-921-140-610		PAUSE BUTTON LEVER
36	S1-821-100-700		FF GEAR
37	S1-829-100-010		PACK SPRING
38	S1-821-100-690		RECORD SAFETY LEVER
39	S1-921-140-210		REC BUTTON LEVER SPRING
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-090-240		MAIN BELT
43	S1-921-093-030		FLYWHEEL ASSY
44	S1-921-070-030		RF BELT
45	S1-921-073-080		RF CLUTCH ASSY
46	S1-921-140-170		P.S.LEVER SPRING
47	S6-209-100-100		E HEAD PH-K380-MS1
48	S6-201-011-110		HEAD,RP7442ES-0951
49	S6-401-011-520		LEAF SW MSW-1541F
50	S1-821-010-500		PLAY BUTTON LEVER SPRING
A	S9-P33-200-320		DEL TITE SCREWM2-3
B	S9-422-000-000		P WASHER CUT 12-3.8-0.3
C	S9-679-000-000		P TAP SCREW M2-5
D	S9-999-180-090		TAP SCREW M2-4.5
E	S9-922-000-000		AZIMUTH SCREW M2-8
F	S9-115-000-000		+ BIND SCREW M2-3
G	S9-004-000-000		SCREW M2-6
H	S9-882-000-000		P WASHER 2-3.5-0.4
I	S9-999-200-410		P TAP SCREW M2-3
J	S9-999-030-130		P WASHER CUT 1.45-3.8-0.
K	S9-179-000-000		C TAP SCREW M2-3
L	S9-999-000-030		P WASHER2.1-4-0.13

TAPE MECHANISM EXPLODED VIEW 2 / 2

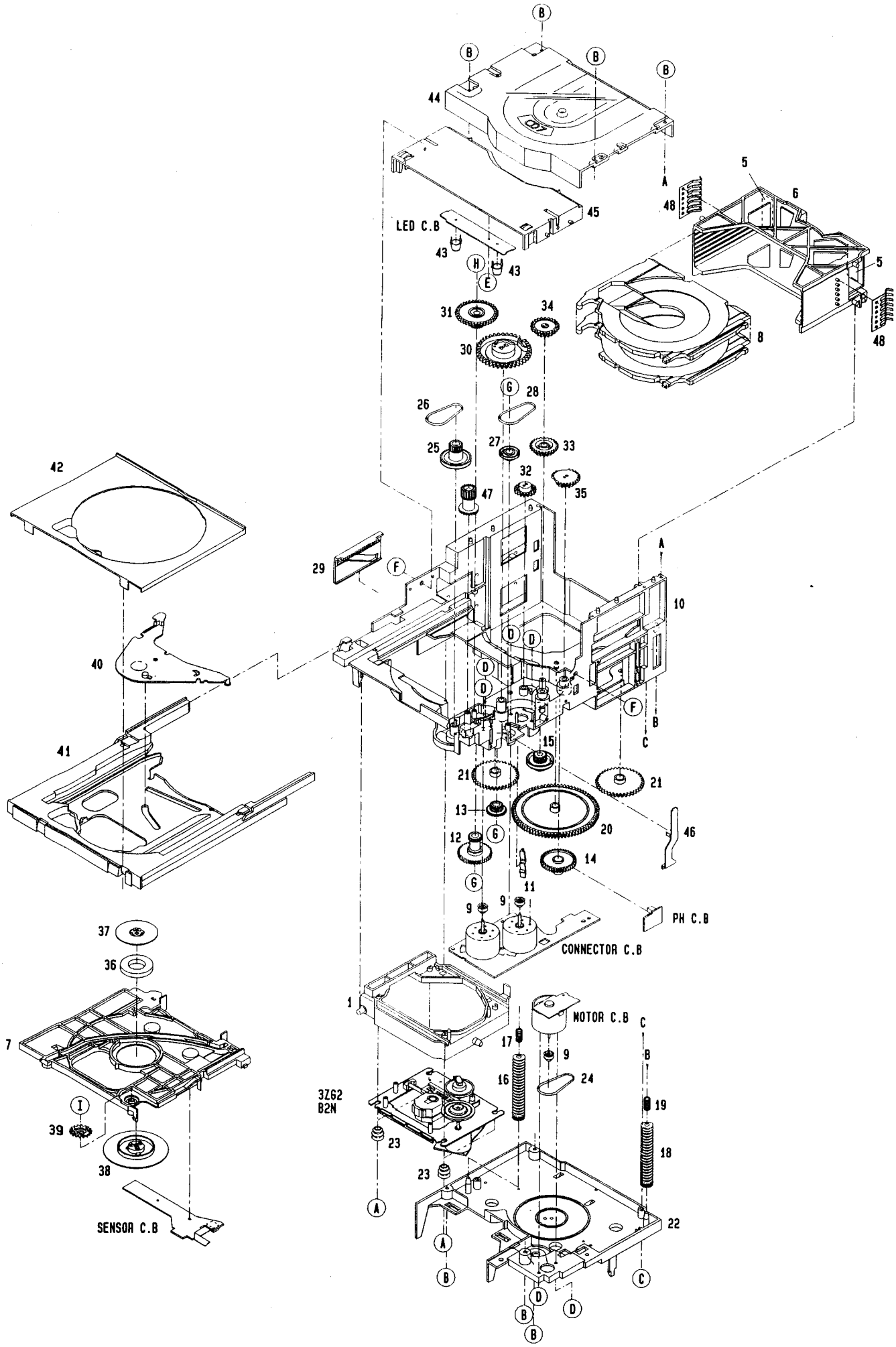


TAPE MECHANISM PARTS LIST 2 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-921-030-4A0		HEAD BASE
2	S1-821-030-070		AZIMUTH SPRING
3	S1-921-030-030		PANEL P SPRING
4	S1-921-260-050		GEAR PLATE SPRING
5	S1-921-265-020		GEAR PLATE ASSY
6	S1-921-140-370		P ARM COLLER
7	S1-921-140-340		P ARM
8	S1-921-030-110		HEAD PANEL
9	S1-921-143-010		BASE ASSY
10	S1-921-141-8A0		M CONTROL SPRING
11	S1-921-260-4A0		SENSING LEVER
12	S1-921-043-090		PINCH ROLLER ARM ASY
13	S1-921-130-020		EJECT SLIDE LEVER
14	S1-921-141-3A0		P CONTROL SPRING
15	S1-921-140-820		PAUSE LEVER(F)
16	S1-921-140-120		PAUSE LEVER SPRING
17	S1-921-140-110		PAUSE STOPPER
18	S1-921-140-150		BUTTON LEVER SPRING(B)
19	S1-821-011-590		E KICK LEVER
20	S1-921-140-140		BUTTON LEVER SPRING(A)
21	S1-921-140-200		PR STOPPER
22	S1-921-140-090		SWITCH ACTUATOR
23	S1-921-140-080		PUSH BUTTON ACTUATOR
24	S1-921-140-230		PLAY BUTTON LEVER
25	S1-821-120-020		MOTOR COLLER SCREW
26	S1-921-140-240		REW BUTTON LEVER
27	S1-921-140-250		FF BUTTON LEVER
28	S1-921-140-260		STOP BUTTON LEVER
29	S1-921-140-610		PAUSE BUTTON LEVER
30	S1-821-100-700		FF GEAR
31	S1-921-050-060		SENSER
32	S1-921-053-030		TAKE UP REEL ASSY
33	S1-829-100-010		PACK SPRING
34	S1-921-053-040		SUPPLY REEL ASSY
35	S1-829-100-100		BACK TENSION SPRING
36	S1-821-120-650		COLLER B
37	S1-921-140-170		P.S.LEVER SPRING
38	S1-921-073-080		RF CLUTCH ASSY
39	S1-921-070-030		RF BELT
40	S1-921-260-020		CAM GEAR
41	S1-921-140-160		E ACTUATOR SPRING
42	S1-921-093-040		FLYWHEEL ASSY
43	S1-921-090-240		MAIN BELT
44	S1-820-130-060		MOTOR RUBBER
45	S1-921-120-130		MOTOR PULLEY
46	S6-002-030-290		MOTOR EG530YD-2BH
47	S1-821-120-680		P KICK LEVER (A)
48	S1-821-120-230		PK COLLER SCREW A
49	S1-821-120-250		P KICK LEVER SPRING
50	S1-921-120-110		MOTOR BRACKET
51	S1-921-120-090		P KICK LEVER
52	S6-201-011-110		HEAD,RP7442ES-0951
53	S6-401-011-520		LEAF SW MSW-1541F
54	S6-401-011-610		LEAF SW MSW-17820MVEI
55	S1-821-010-500		PLAY BUTTON LEVER SPRING
A	S9-P33-200-320		DEL TITE SCREWM2-3
B	S9-180-000-000		C TAP SCREW M2-4
C	S9-679-000-000		P TAP SCREW M2-5
D	S9-999-180-090		TAP SCREW M2-4.5
E	S9-004-000-000		SCREW M2-6
F	S9-115-000-000		+ BIND SCREW M2-3
G	S9-922-000-000		AZIMUTH SCREW M2-8
H	S9-182-000-000		C TAP SCREW M2-6
I	S9-422-000-000		P WASHER CUT 12-3.8-0.3
J	S9-999-030-130		P WASHER CUT 1.45-3.8-0.
K	S9-882-000-000		P WASHER 2-3.5-0.4
L	S9-999-000-030		P WASHER2.1-4-0.13
M	S9-999-200-410		P TAP SCREW M2-3

CD MECHANISM EXPLODED VIEW 1 / 2

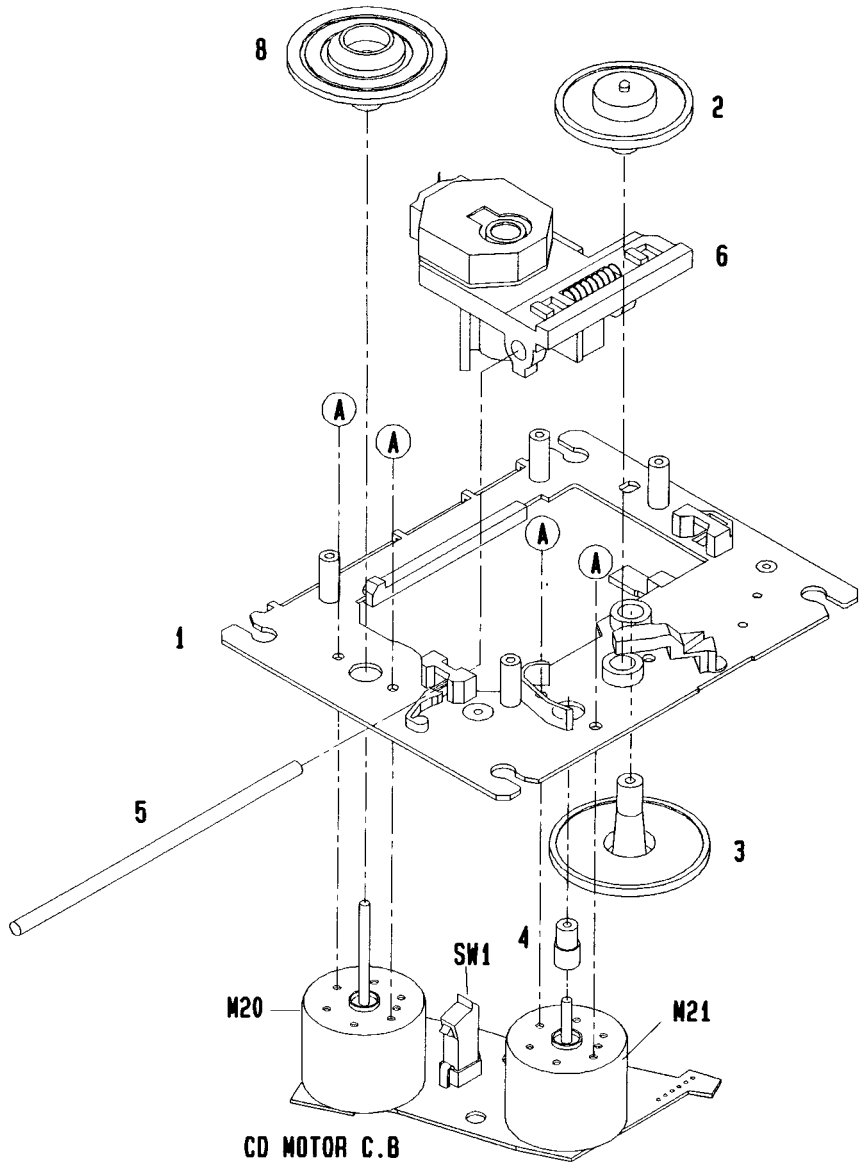


CD MECHANISM PARTS LIST 1 / 2

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	84-ZG2-205-010		HLDR,MECH
5	84-ZG2-237-010		CLOTH,BOX
6	84-ZG2-203-010		BOX,TRAY
7	84-ZG2-204-010		HLDR,MAGNET
8	84-ZG2-004-010		TRAY,DISC 12
9	84-ZG2-228-010		PULLEY,MOT
10	84-ZG2-201-010		CHAS,MECH
11	84-ZG2-225-010		LVR,A
12	84-ZG2-213-010		GEAR,TRAY LOAD-B
13	84-ZG2-214-010		GEAR,TRAY LOAD-C
14	84-ZG2-209-010		GEAR,UP DOWN-B
15	84-ZG2-208-010		GEAR,UP DOWN-A
16	84-ZG2-206-010		GEAR,CAM BOX 1
17	84-ZG2-238-010		SPR-C,G-BOX 1
18	84-ZG2-207-010		GEAR,CAM BOX 2
19	84-ZG2-239-010		SPR-C,G-BOX 2
20	84-ZG2-210-010		GEAR,UP DOWN-C
21	84-ZG2-211-010		GEAR,UP DOWN-D
22	84-ZG2-202-010		CHAS,BOTTOM
23	80-CD3-214-010		CUSH CD A
24	84-ZG2-231-010		BELT,SQ-C
25	84-ZG2-221-010		GEAR,MECH-F
26	84-ZG2-229-010		BELT,SQ-A
27	84-ZG2-215-010		GEAR,TRAY LOAD-D
28	84-ZG2-230-010		BELT,SQ-B
29	84-ZG2-224-010		CAM,SL
30	84-ZG2-223-010		GEAR,CAM
31	84-ZG2-220-010		GEAR,MECH-E
32	84-ZG2-219-010		GEAR,MECH-D
33	84-ZG2-218-010		GEAR,MECH-C
34	84-ZG2-217-010		GEAR,MECH-B
35	84-ZG2-216-010		GEAR,MECH-A
36	87-036-326-010		MAGNET,CLAMPER 93
37	81-ZG1-229-110		PLATE,MAGNET
38	81-ZG1-228-210		HLDR,MAGNET
39	84-ZG2-222-010		GEAR,CAM LOCK
40	84-ZG2-003-010		LVR,TRAY
41	84-ZG2-001-010		TRAY,L
42	84-ZG2-002-010		TRAY,COVER
43	84-ZG2-240-010		COVER,LED 2
44	84-ZG2-011-010		COVER,TOP S
45	84-ZG2-010-010		COVER,LED
46	84-ZG2-226-010		LVR,B
47	84-ZG2-212-010		GEAR,TRAY LOAD-A
48	84-ZG2-232-010		SPR-P,LOCK
A	81-ZG1-271-010		S-SCREW,MECH REAR
B	87-067-703-010		BVT2+3-10 (W/O SLOT)
C	87-067-822-010		BVT 2+3-20W/O SLOT
D	87-251-071-410		U+2.6-4
E	87-067-584-010		BVT2+3-6
F	87-721-097-410		QT2+3-12 GLD
G	87-067-828-010		VFT2+3-15DIA10,GLD
H	87-078-061-010		VFT2+3-20DIA10,GLD
I	87-761-097-410		VFT2 +3-12

CD MECHANISM EXPLODED VIEW 2 / 2



CD MECHANISM PARTS LIST 1 / 1

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	83-ZG2-202-51K		O-SERT S ASSY,S
2	83-ZG2-204-419		GEAR,A
3	83-ZG2-205-219		GEAR,B
4	83-ZG2-220-01K		GEAR MOTOR 2
5	83-ZG2-207-119		SHAFT,SLIDE
6	87-026-625-019		PICK UP MPC-1C
8	83-ZG2-222-01K		TURN TABLE,A5
A	87-261-032-219		SCREW V+2-3

ACCESSORIES / PACKAGE LIST

If can't understand for Description please kindly refer to " REFERENCE NAME LIST ".

REF. NO.	PART NO.	KANRI NO.	DESCRIPTION
1	S1-023-430-101		DOOR,REMOTE(BLK)
2	S2-3A0-092-000		PLUG,CONVERSION<HE,HR,LH>
2	S2-3A0-151-000		PLUG,CONVERSION<K>
3	S1-400-122-000		CORD,POWER AC<EXCEPT U>
3	S1-400-221-000		CORD,POWER AC U<U>
4	S4-400-842-000		INSTRUCTION MANUAL<U,LH>
4	S4-400-921-000		INSTRUCTION MANUAL<EE,K,EZ>
4	S4-400-931-000		INSTRUCTION MANUAL<HE,HR>
4	S4-401-161-000		INSTRUCTION MANUAL<EE,EZ>
5	SR-CDW-700-M00		REMOCON,ASSY(CADW700M)

REFERENCE NAME LIST

ELECTRICAL SECTION

DESCRIPTION	REFERENCE NAME
ANT	ANTENNAS
C-	CHIP
C-CAP	CAP, CHIP
C-CAP TN	CAP, CHIP TANTALUM
C-COIL	COIL, CHIP
C-DI	DIODE, CHIP
C-DIODE	DIODE, CHIP
C-FET	FET, CHIP
C-FOTR	FILTER, CHIP
C-JACK	JACK, CHIP
C-LED	LED, CHIP
C-RES	RES, CHIP
C-SFR	SFR, CHIP
C-SLIDE SW	SLIDE SWITCH, CHIP
C-SW	SWITCH, CHIP
C-TR	TRANSISTOR, CHIP
C-VR	VOLUME, CHIP
C-ZENER	ZENER, CHIP
CAP, CER	CAP, CERA-SOL
CAP, E	CAP, ELECT
CAP, M/F	CAP, FILM
CAP, TC	CAP, CERA-SOL
CAP, TC-U	CAP, CERA-SOL SS
CAP, TN	CAP, TANTALUM
CERA FIL	FILTER, CERAMIC
CF	FILTER, CERAMIC
DL	DELAY LINE
E/CAP	CAP, ELECT
FILT	FILTER
FLTR	FILTER
FUSE RES	RES, FUSE
MOT	MOTOR
P-DIODE	PHOTO DIODE
P-SNSR	PHOTO SENSER
P-TR	PHOTO TRANSISTOR
POLY VARI	VARIABLE CAPACITOR
PPCAP	CAP, PP
PT	POWER TRANSFORMER
PTR, RES	PTR, MELF
RC	REMOTE CONTROLLER
RES NF	RES, NON-FLAMMABLE
RESO	RESONATOR
SHLD	SHIELD
SOL	SOLENOID
SPKR	SPEAKER
SW, LVR	SWITCH, LEVER
SW, RTRY	SWITCH, ROTARY
SW, SL	SWITCH, SLIDE
TC CAP	CAP, CERA-SOL
THMS	THERMISTOR
TR	TRANSISTOR
TRIMER	CAP, TRIMMER
TUN-CAP	VARIABLE CAPACITOR
VIB, CER	RESONATOR, CERAMIC
VIB, XTAL	RESONATOR, CRYSTAL
VR	VOLUME
ZENER	DIODE, ZENER

MECHANICAL SECTION

DESCRIPTION	REFERENCE NAME
ADHESHIVE	SHEET ADHESHIVE
AZ	AZIMUTH
BAR-ANT	BAR-ANTENNA
BAT	BATTERY
BATT	BATTERY
BRG	BEARING
BTN	BUTTON
CAB	CABINET
CASS	CASSETTE
CHAS	CHASSIS
CLR	COLLAR
CONT	CONTROL
CRSR	CURSOR
CU	CUSHION
CUSH	CUSHION
DIR	DIRECTION
DUBB	DUBBING
FL	FRONT LOADING
FLY-WHL	FLYWHEEL
FR	FRONT
FUN	FUNCTION
G-CU	G-CUSHION
HDL	HANDOL
HIMERON	CLOTH
HINGE, BAT	HINGE, BATTERY
HLDR	HOLDER
HT-SINK	HEAT SINK
IB	INSTRUCTION BOOKLET
IDLE	IDLER
IND, L-R	INDICATOR, L-R
KEY, CONT	KEY, CONTROL
KEY, PRGM	KEY, PROGRAM
KNOB, SL	KNOB, SLIDE
LBL	LABEL
LID, BATT	LID, BATTERY
LID, CASS	LID, CASSETTE
LVR	LEVER
P-SP	P-SPRING
PANEL, CONT	PANEL, CONTROL
PANEL, FR	PANEL, FRONT
PRGM	PROGRAM
PULLY, LOAD MO	PULLY, LOAD MOTOR
RBN	RIBBON
S-	SPECIAL
SEG	SEGMENT
SH	SHEET
SHLD-SH	SHIELD-SHEET
SL	SLIDE
SP	SPRING
SP-SCREW	SPECIAL-SCREW
SPACER, BAT	SPACER, BATTERY
SPR	SPRING
SPR-P	P-SPRING
SPR-PC-PUSH	P-SPRING, C-PUSH
T-SP	T-SPRING
TERM	TERMINAL
TRIG	TRIGGER
TUN	TUNING
VOL	VOLUME
W	WASHER
WHL	WHEEL
WORM-WHL	WORM-WHEEL

サービス技術ニュース	
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